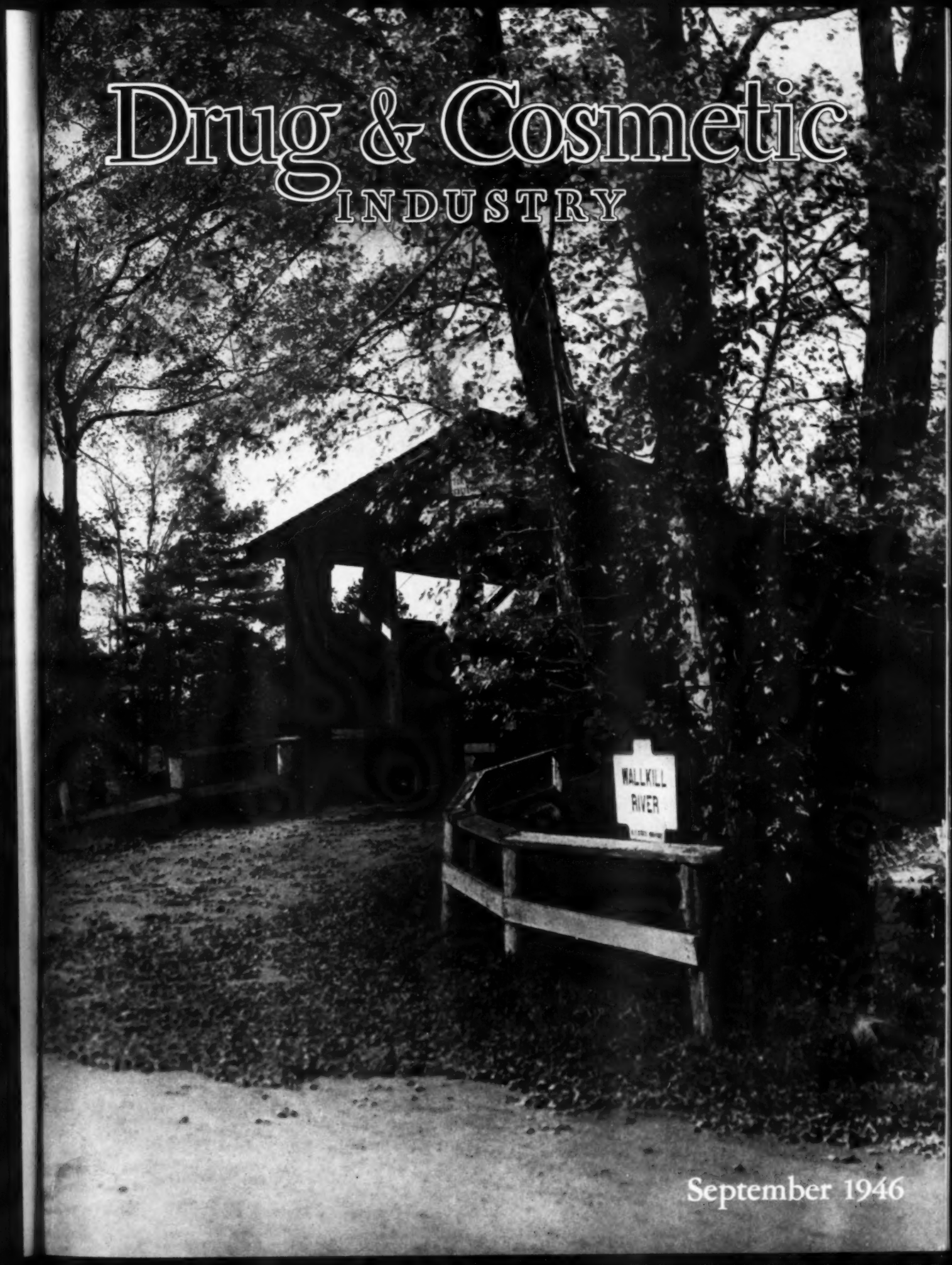
Drug & Cosmetic INDUSTRY



September 1946

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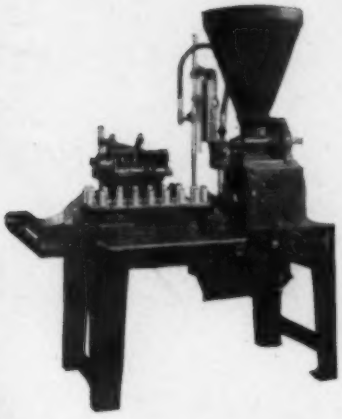

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Drug & Cosmetic INDUSTRY

SEPTEMBER 1946

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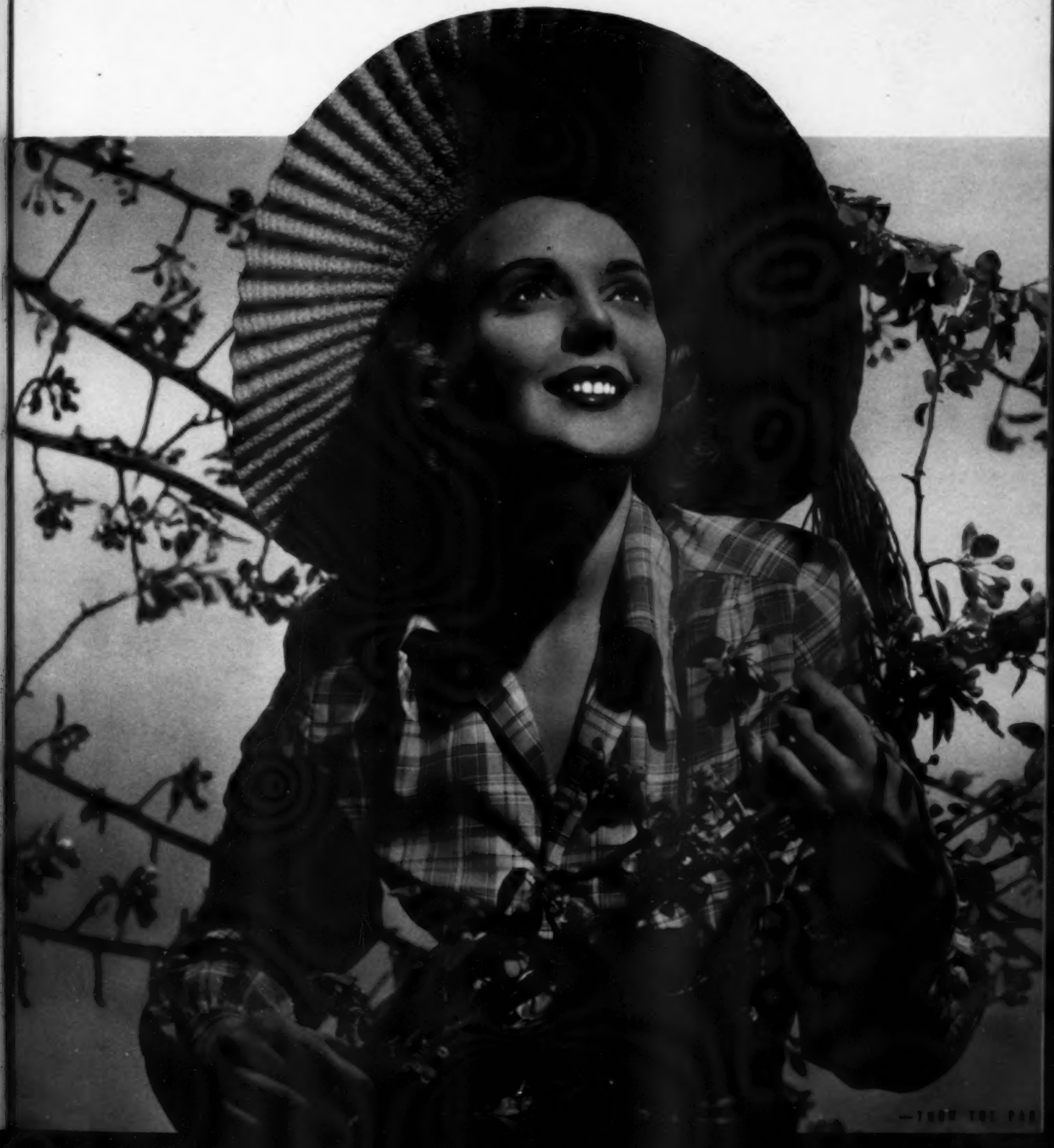

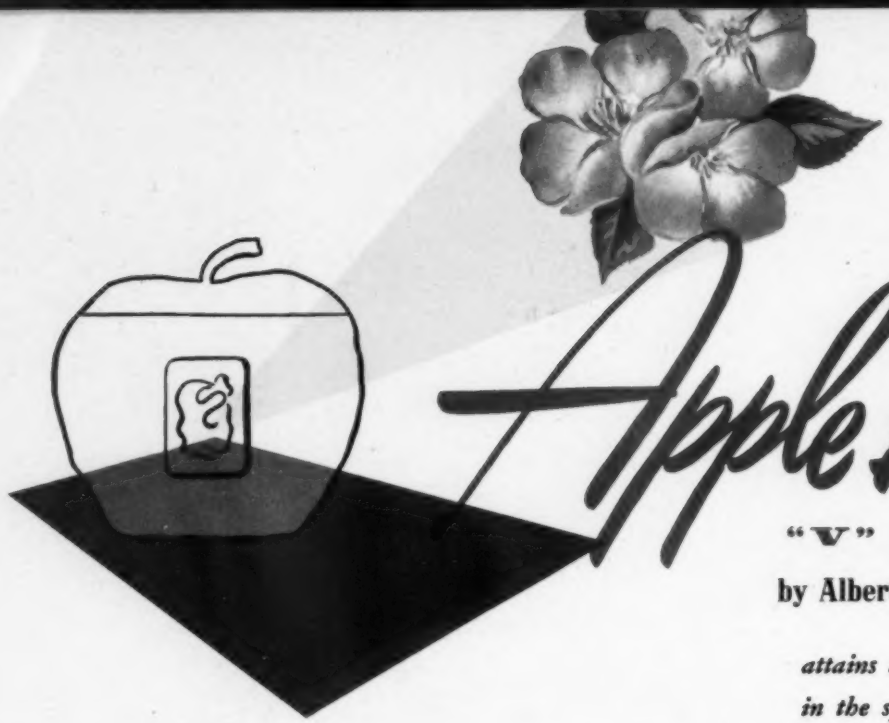

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THE EDITORIAL POLICY OF American Druggist

An Old American Custom

It is an old American custom to solve common problems by open discussion. This desire for freedom of expression explains the purpose and popularity of open forums, town hall meetings, and publications like American Druggist.

There are other useful and good drug publications, but none serves the same purpose as American Druggist. Because it is neither a newspaper nor an official organ of any one association or group, it is able to serve the entire drug industry as an independent journal of opinion. Its distinctive purpose and policy has given American Druggist the prestige, character and responsibility of a town hall meeting in the community of interest represented by the drug industry.

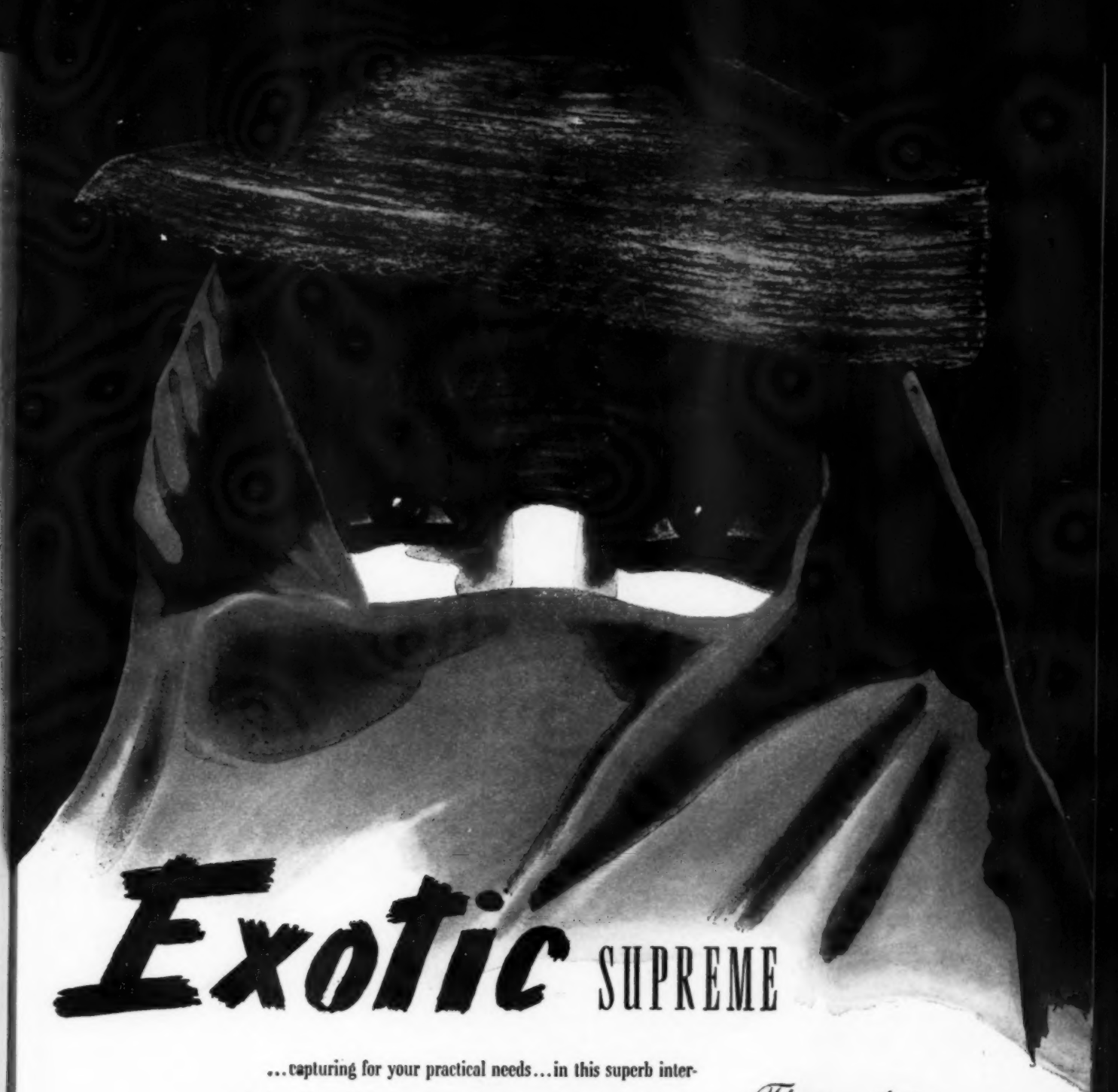
Our major interest is in the welfare of retail druggists because their retail drug stores are the greatest public expression of pharmacy, and because the drug industry of today could not exist without them. Nevertheless, we are not unmindful of their common interest in the problems of wholesalers and manufacturers. Our sincere desire is to promote an exchange of views on mutual problems and thus eliminate much of the unnecessary misunderstanding that so often delays needed solutions to those problems. We are naturally for all organizations that serve the various branches of the drug industry but, in fairness to all of them, we have no affiliation or political interest in any single group. With honest friendship for all associations, it is our editorial purpose to provide the greatly needed freedom of expression that clarifies problems, reveals the real issues, and stimulates sound thinking.

In every group and association of the drug industry there are more than enough good thinkers to solve any problem that is clearly defined. Our editorial responsibility is not to solve these problems, but to have the courage and wisdom to present the real issues in such a way as to create constructive thinking and action.

We are glad that the democratic purpose of American Druggist is becoming known and respected by association leaders who share our faith in the decisions of an enlightened majority. They agree with us that America is a democracy, not a dictatorship, and that retail druggists are rugged individualists who believe in the old American custom of free discussion. In the interest of constructive goals, American Druggist will always follow this custom.

John W. McFarren

EDITOR



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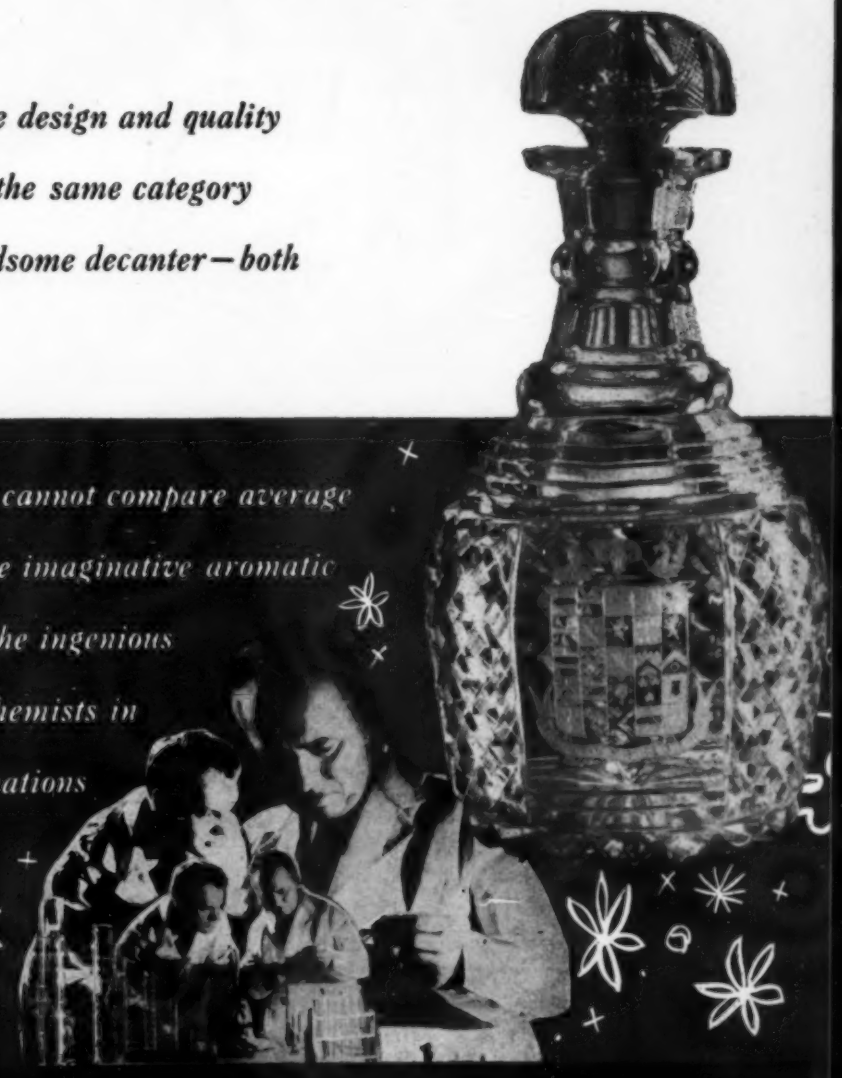

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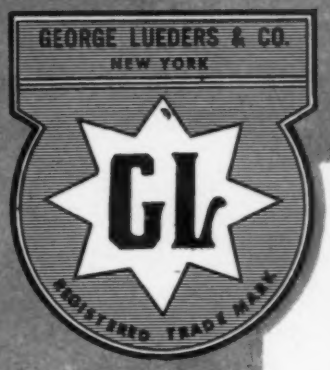

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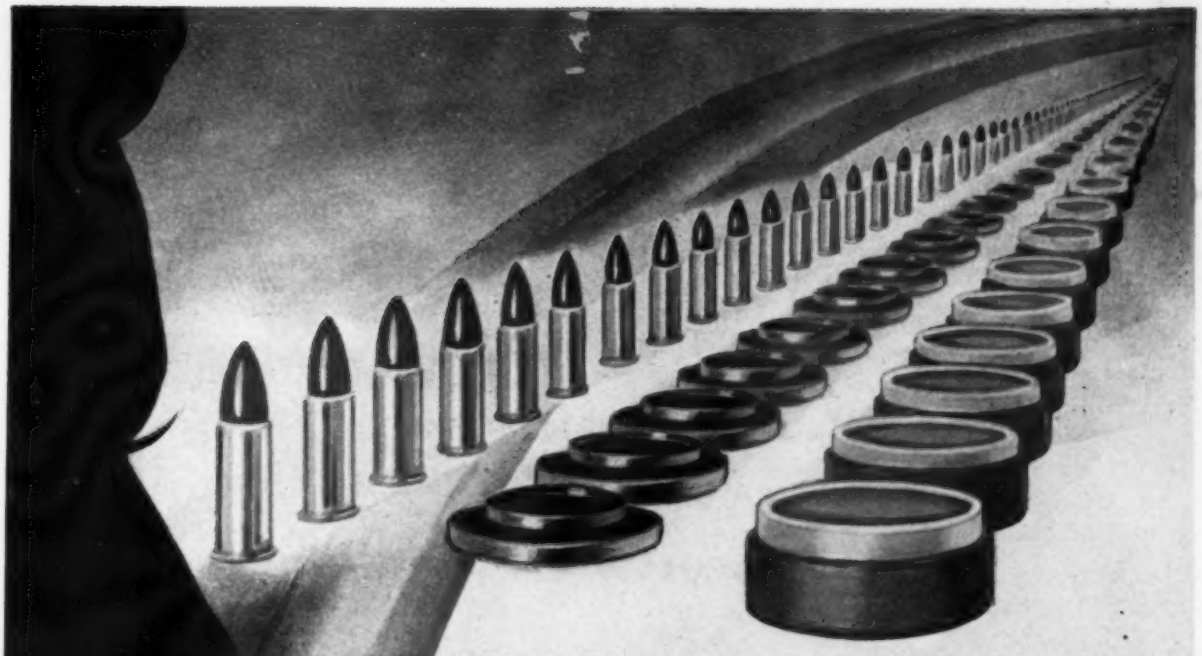

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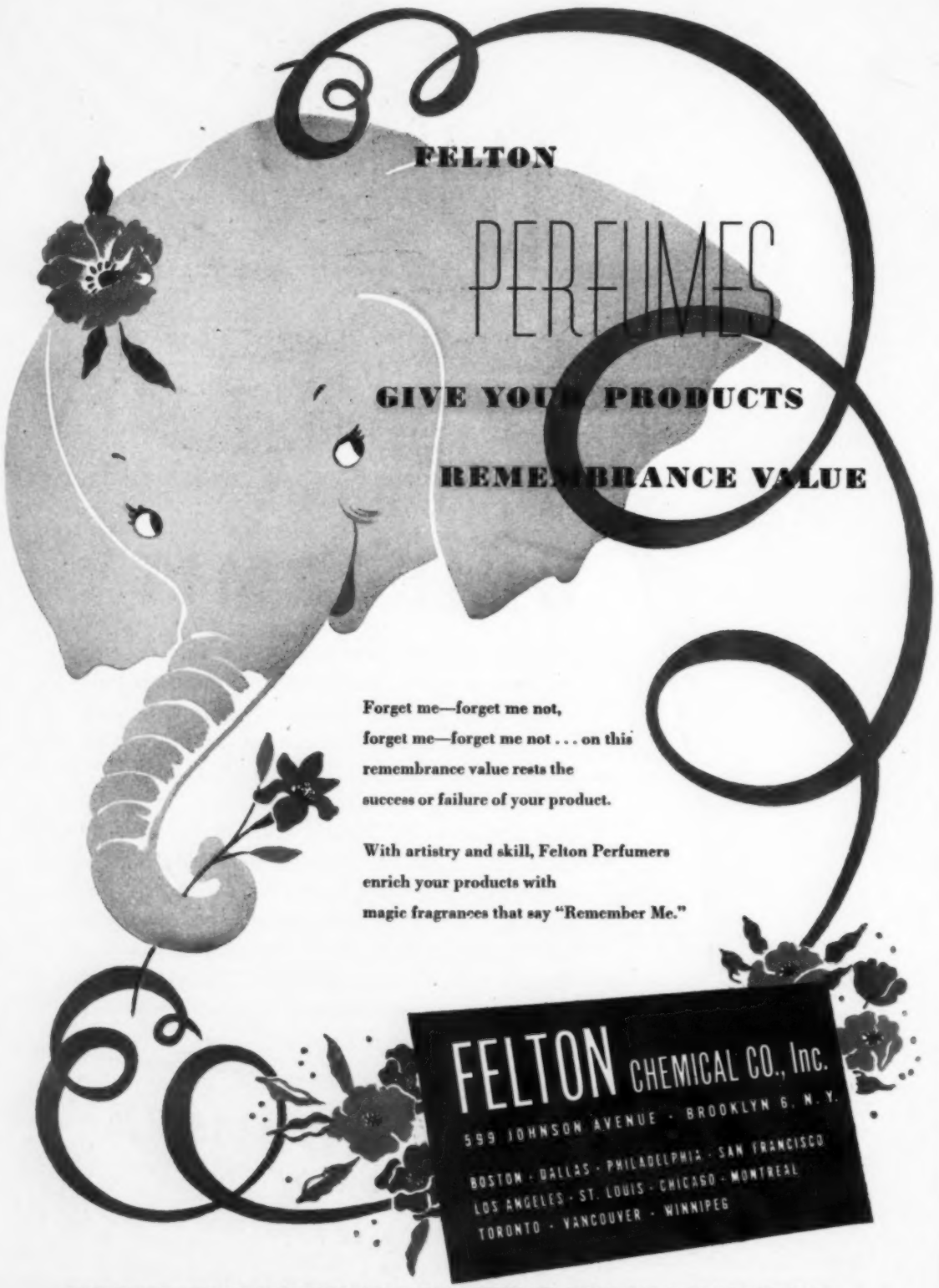

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S.K.F.'S PATENT ON AMPHETAMINE SULFATE UPHELD BY U. S. CIRCUIT COURT OF APPEALS

The United States Circuit Court of Appeals, 3rd Circuit, on August 6, 1946, affirmed the decision of the United States District Court for the District of New Jersey in the suit of Smith, Kline & French Laboratories, vs. Clark & Clark, holding S.K.F.'s patent #1,879,003, covering amphetamine sulfate to be valid and holding defendants' imitations of our 'Benzedrine' Tablets to constitute unfair competition. Immediate legal action will be taken against anyone selling or dispensing amphetamine sulfate other than our 'Benzedrine' and 'Dexedrine'. This includes amphetamine sulfate used in obesity preparations.

SMITH, KLINE & FRENCH LABORATORIES
Philadelphia, Pa.

'Benzedrine' and 'Dexedrine' are Smith, Kline & French Laboratories' trademarks for amphetamine sulfate.

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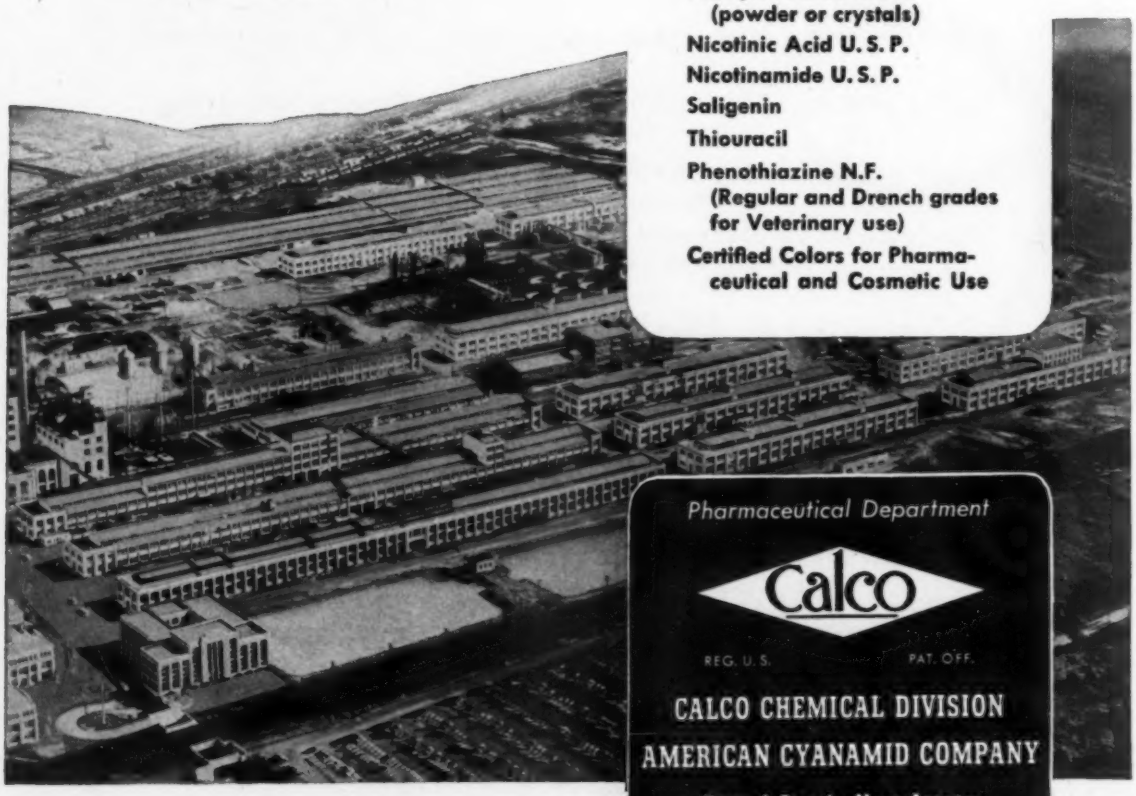

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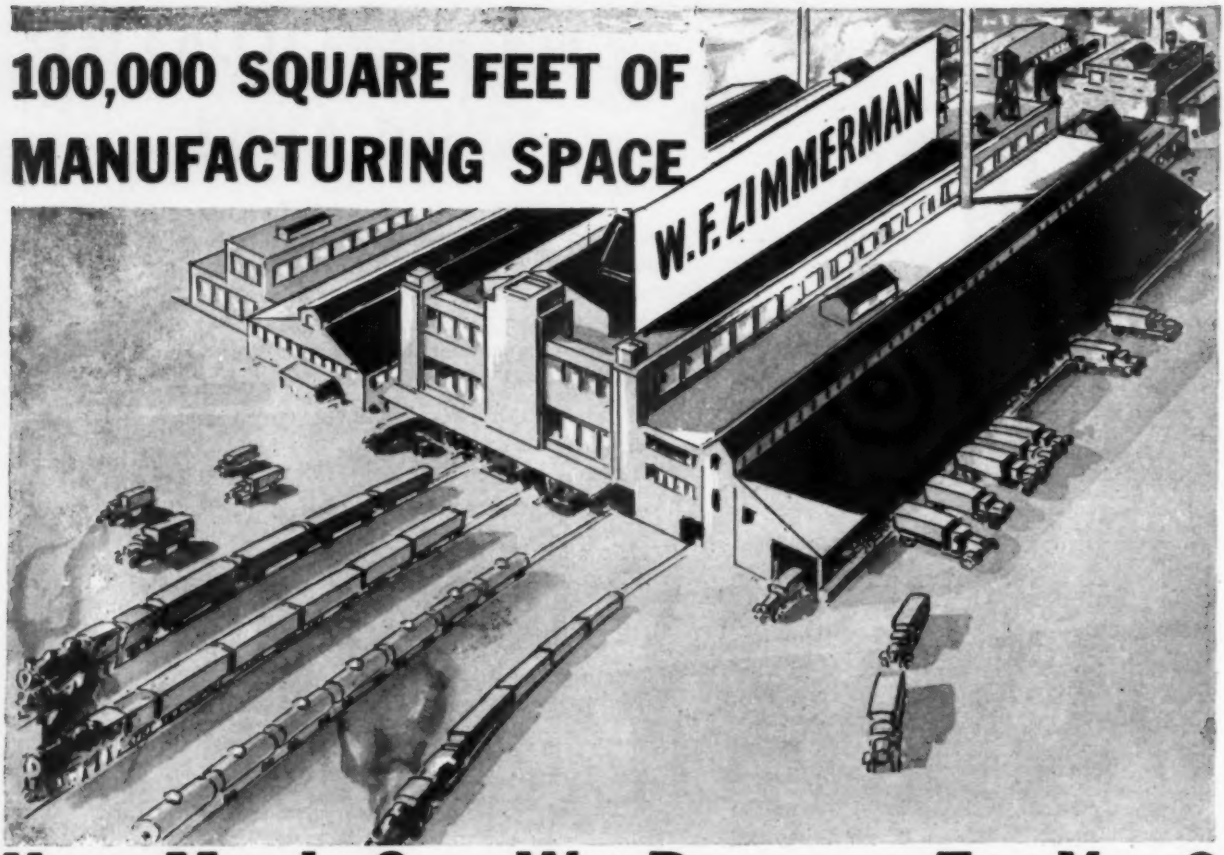

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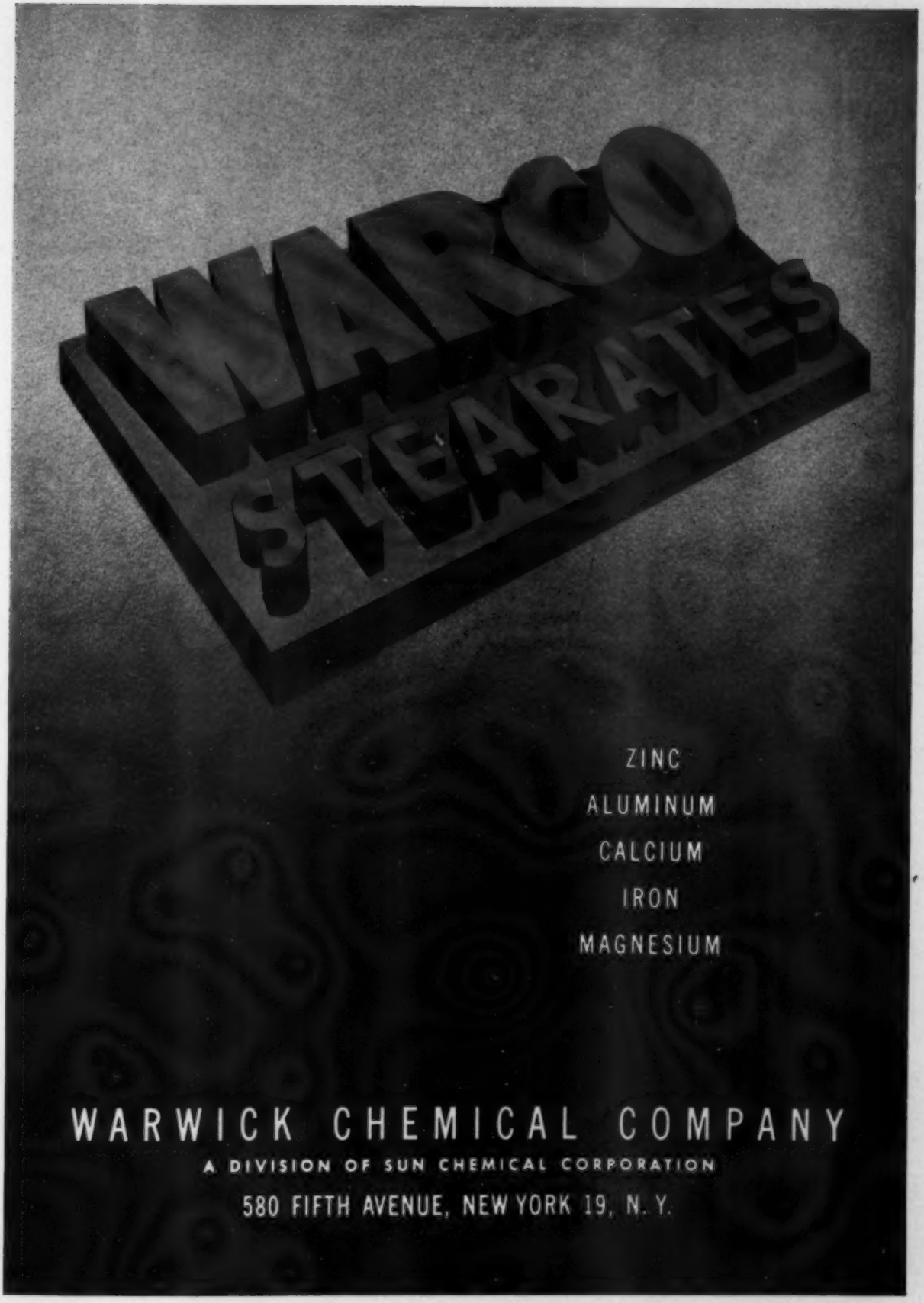
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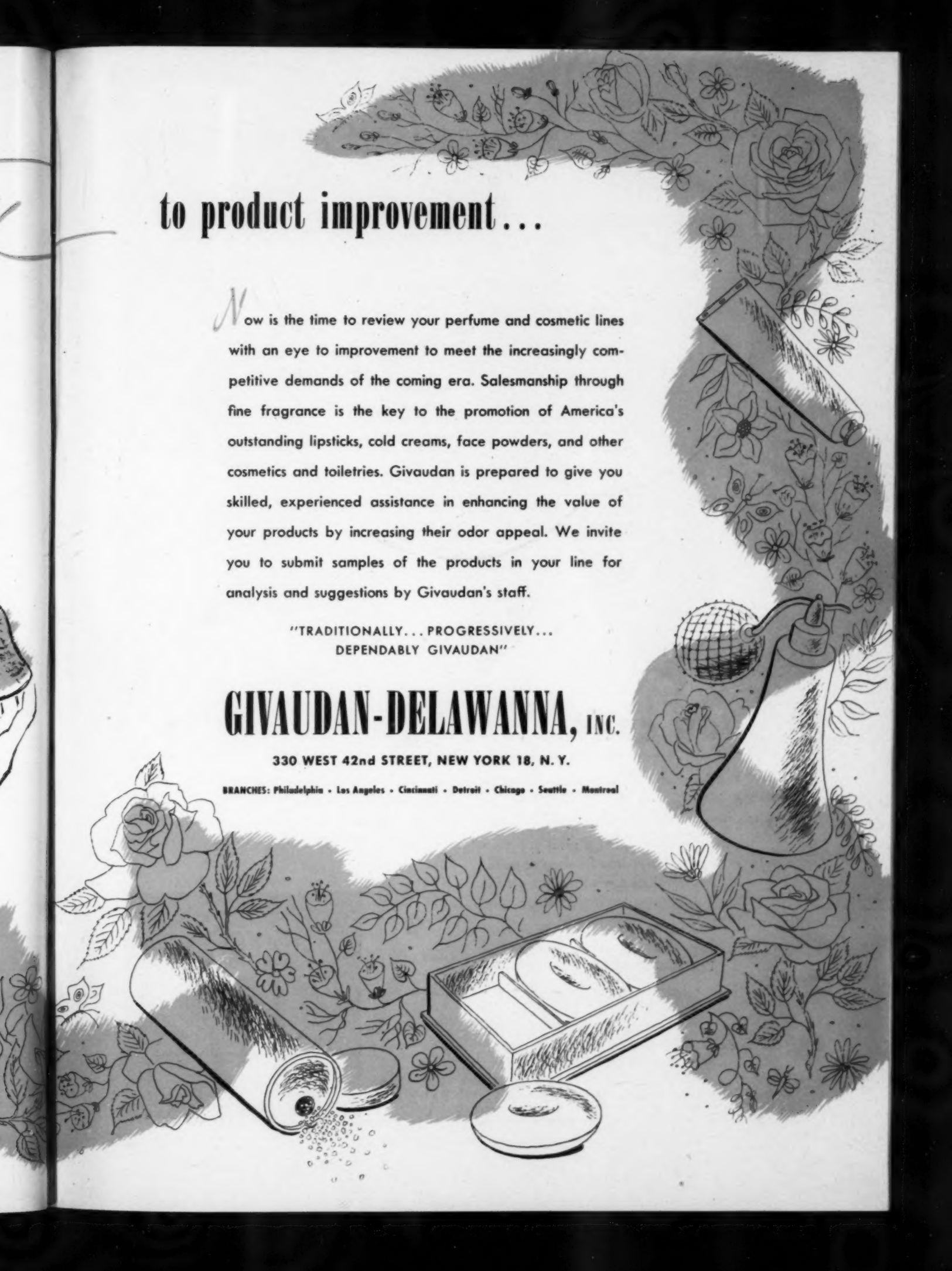

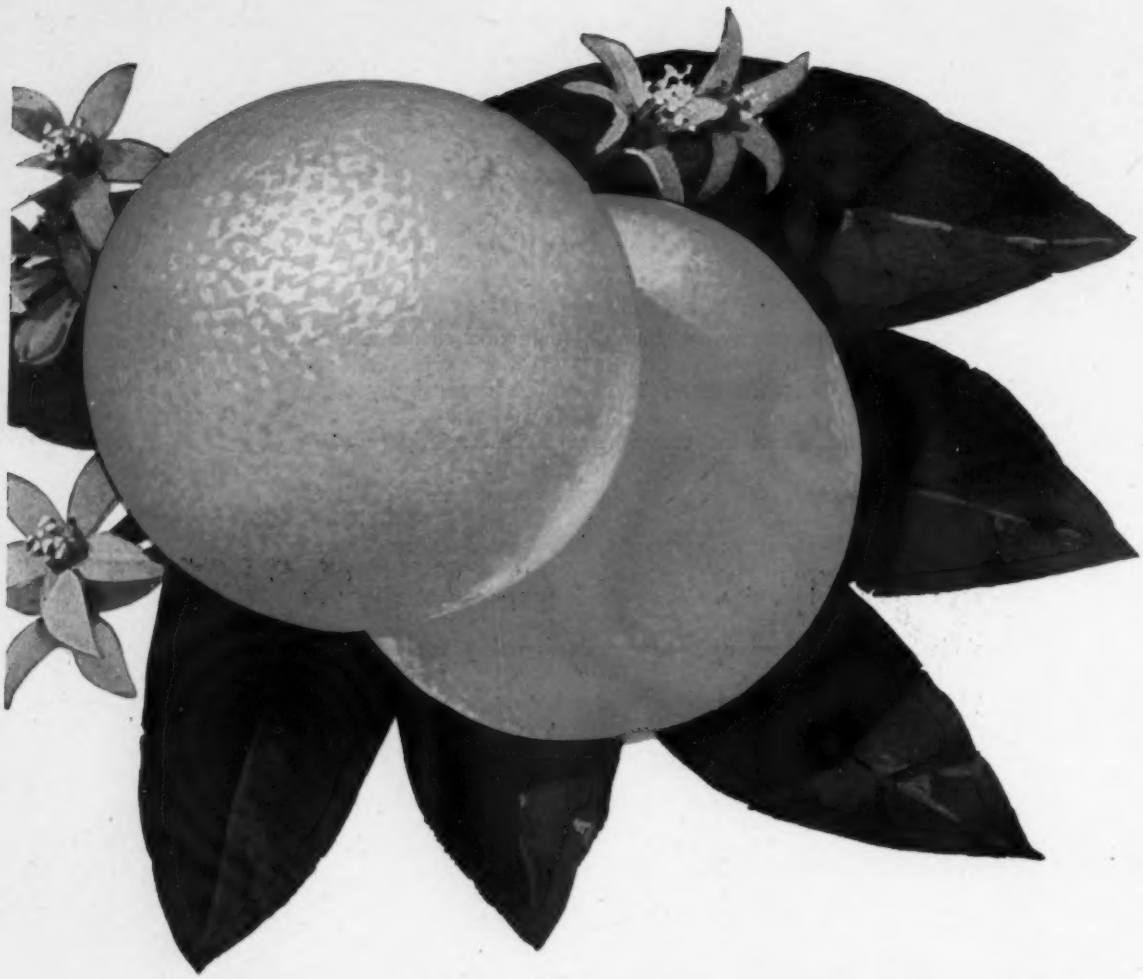

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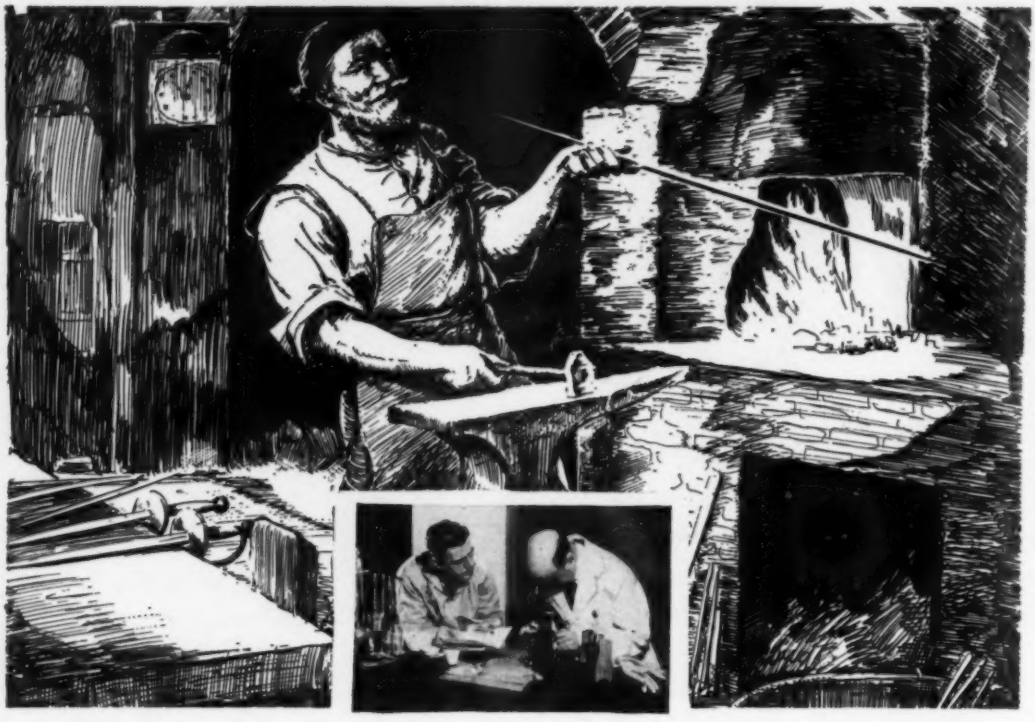

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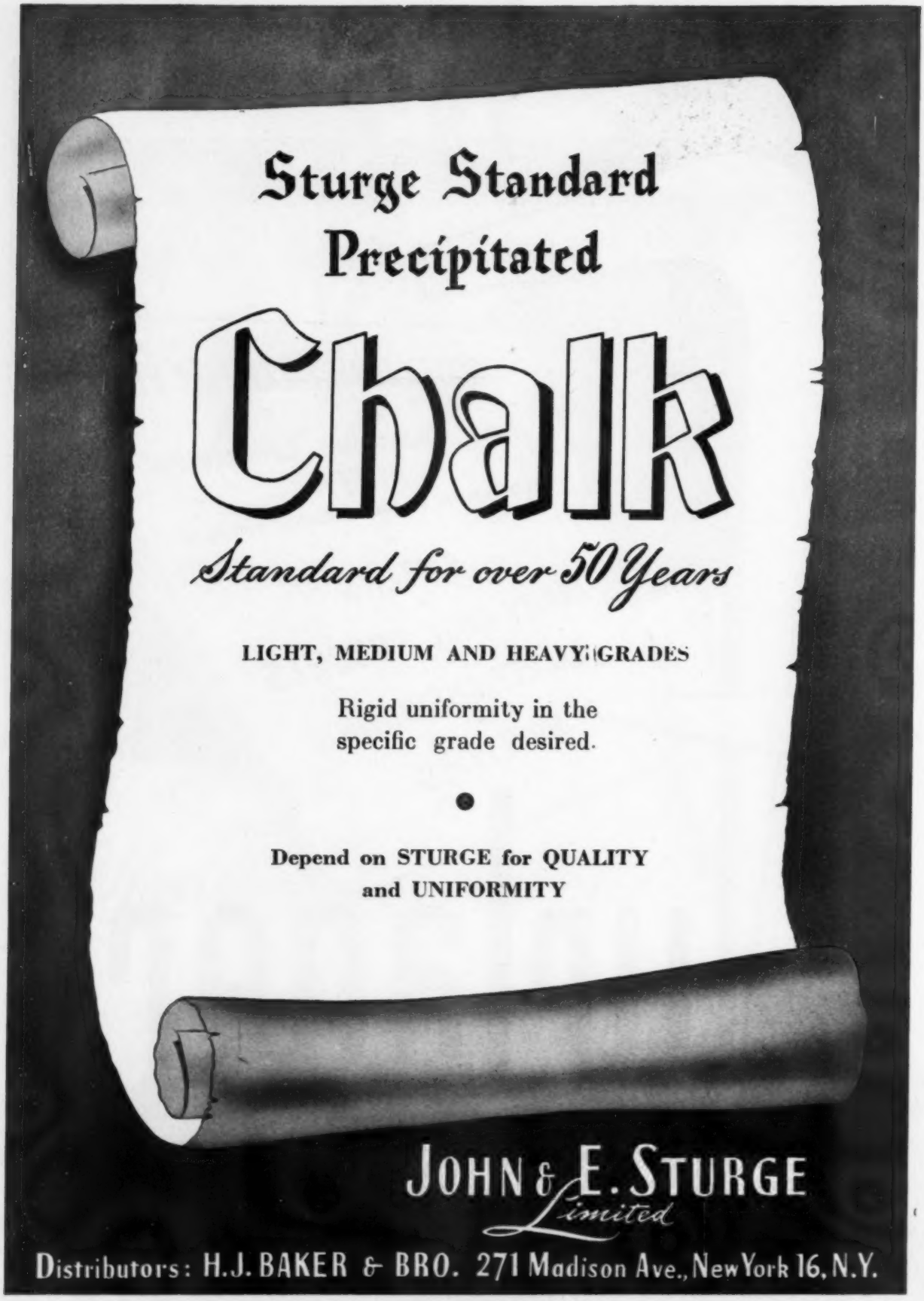
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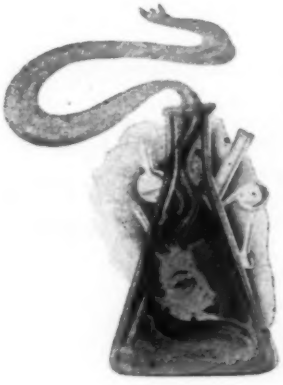

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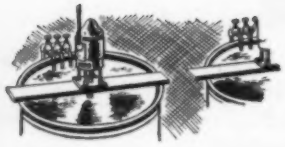

Emulsions are easily prepared with isopropanolamine soaps because they permit wide flexibility in formulation. A liquid mixture of the three isopropanolamines is available and is especially suitable for this purpose. The low alkalinity of such emulsions is advantageous too, for it prevents corrosion of metals or injury to fine textiles.

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Monoisopropanolamine and diisopropanolamine are useful as intermediates in the manufacture of synthetic detergents by condensation with fatty acids or acid chlorides. These detergents are advantageous because of low alkalinity and resistance to hard water.

Samples will be supplied upon request for your evaluation as emulsifying agents and intermediates for detergents. For technical data sheets on properties and specifications write or phone our nearest office.

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TINY FRONDS OF CARRAGEEN (edible Irish moss), gathered from the cold ocean floor, yield the pure vegetable gelose Kraft uses in the manufacture of Kraystay.

THIS VEGETABLE GELOSE is highly refined, dehydrated and milled. These light feathery flakes are the basic ingredient of Kraystay. The finished product is colorless, odorless and tasteless. Scientific laboratory control insures the uniform high quality of this consistently efficient stabilizer.

SCORES OF MANUFACTURERS have already added Kraystay to their formulae. Many more are in the process of adapting Kraystay to the manufacture of their products. From cosmetics to cream soups, lotions, toothpaste, shoe polish, pharmaceuticals, paints, inks, pie fillings ...over 50 industries altogether are represented.

DOES YOUR PRODUCT "SETTLE OUT"? If it's of medium or low acidity, Kraystay may very likely be the solution. This amazing stabilizer, when used in varied proportions, has unusual stabilizing, emulsifying, suspending, gelling and thickening properties.

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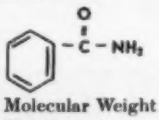
LET KRAFT TECHNICIANS HELP YOU. *If your product requires an agent of this type, call or write today, stating your problem. Or if you wish to submit your formula, these experts will be glad to assist you in the application of Kraystay to your product. Kraft Foods Company, Dept. Y-5, 500 Peshtigo Court, Chicago 90, Illinois.*

Hooker Research Presents Three New Chemicals with a Useful Future

Among the many new chemicals Hooker Research has developed during the past year, the three listed here have proved of such interest to research chemists and in such different areas that we feel warranted in bringing them to your attention again. Should a scanning of the condensed description cause a desire for more detailed information on any of them, we shall be glad to send you Technical Data Sheets giving more comprehensive physical and chemical characteristics. The coupon below makes it easier for you to request additional information.

BENZAMIDE

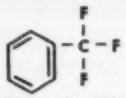


Molecular Weight	121.3
Melting point	125°C
Boiling point	290°C
Flash point	164°C
Fire point	185°C

Benzamide (Amide of Benzoic Acid) is a white, free-flowing monoclinic crystalline material. It is soluble in alcohol, acetone, hot water, and hot benzene; slightly soluble in cold water and other solvents.

Its physical and chemical properties suggest its possible application in the field of organic synthesis, including dyestuffs, pharmaceuticals and plastics. It is compatible with a limited number of resins including cellulose acetate and nitrocellulose with which it forms a firm transparent film.

BENZOTRIFLUORIDE

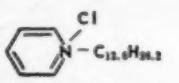


Molecular Weight	146.1
Freezing range	-28.5° to -29.5°C
Boiling range(ASTM,98%)	2.5° including 101°C
Refractive index, n20/D	1.4145±.0005
Specific gravity, 15.5°/15.5°C	1.197±.001
Flash point	12°C

Benzotrifluoride is a water white liquid with an aromatic odor. It is completely miscible with most organic solvents. Thermal stability is excellent and under nitration or chlorination the CF_3 group is strongly meta directing.

A study of possible applications indicates that Benzotrifluoride may be of value in several industrial fields; dyestuffs, dielectrics, medicinals, insecticides, or other organic chemical synthesis.

LIQUID LAURYL PYRIDINIUM CHLORIDE



Molecular Weight (ave. active ingredient)	292.3
Specific Gravity, 15.5°/15.5°C	1.00
Freezing point	-1°C
Boiling point	100°C
pH	7.0

Liquid L. P. C. is a 30% water solution of Lauryl Pyridinium Chloride. It is a purified, non-staining, odorless, practically colorless product. It is miscible in any proportion with water and water miscible solvents as lower alcohols, acetone, and glycols. It is a cationic surface-active quaternary ammonium derivative possessing strong bactericidal and bacteriostatic properties.

Its germicidal, detergent, and penetrating characteristics suggest many possible applications in the field of detergent antiseptics, in the preparation of fungicides and disinfectants, and in textile finishing compounds. It also has possibilities in the preparation of cosmetic cotton, sterile bandages and other bactericidal or germicidal specialties.

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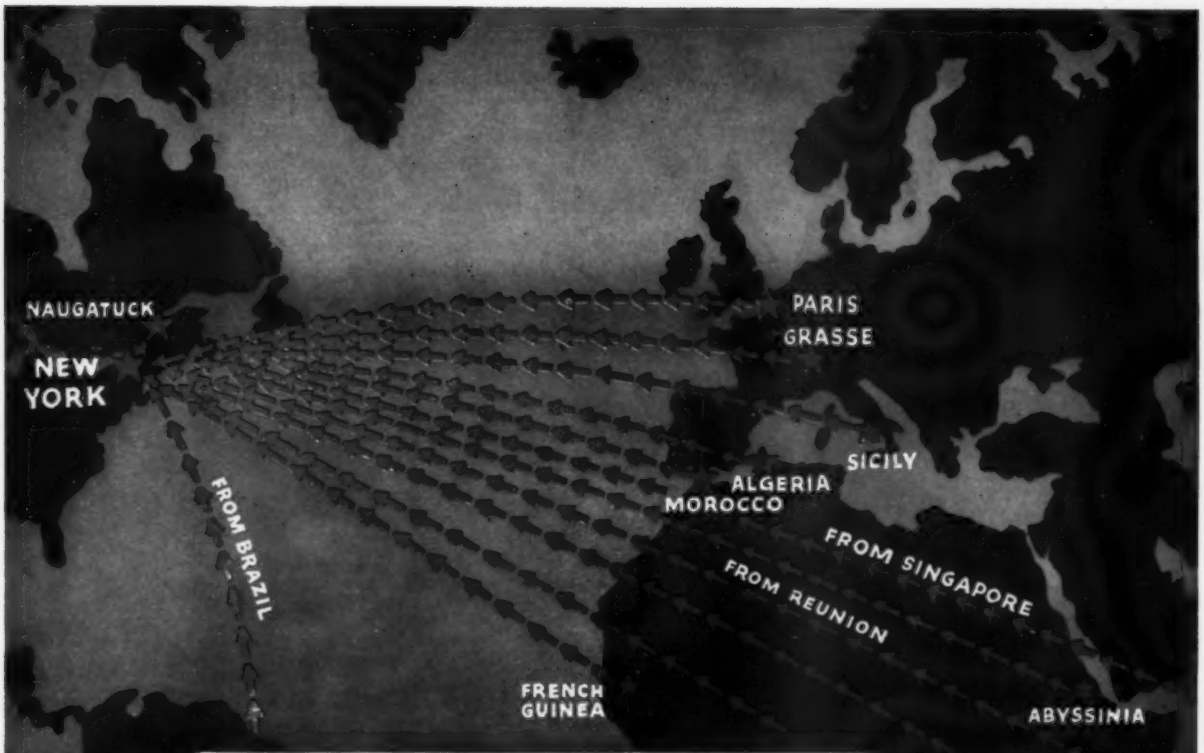

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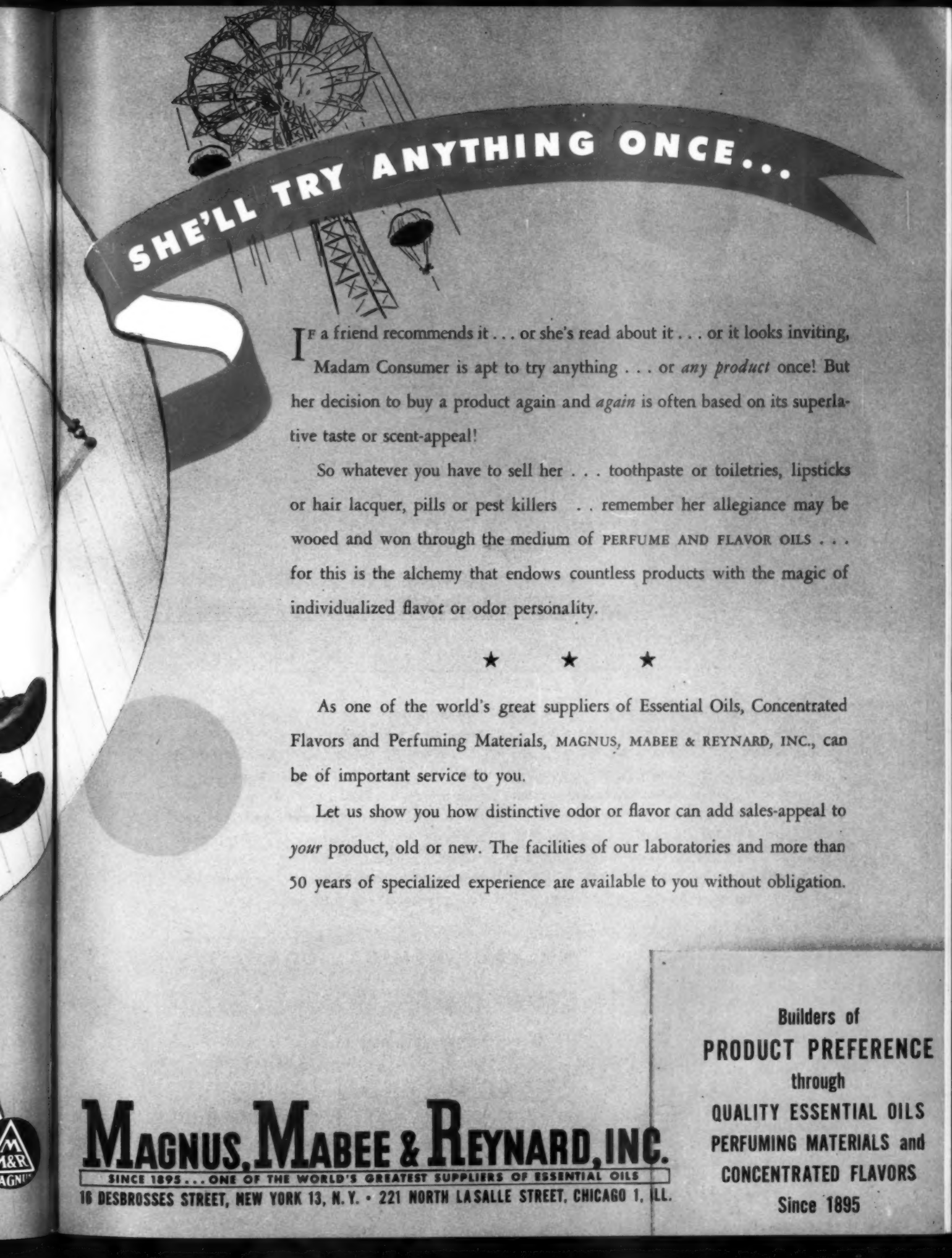

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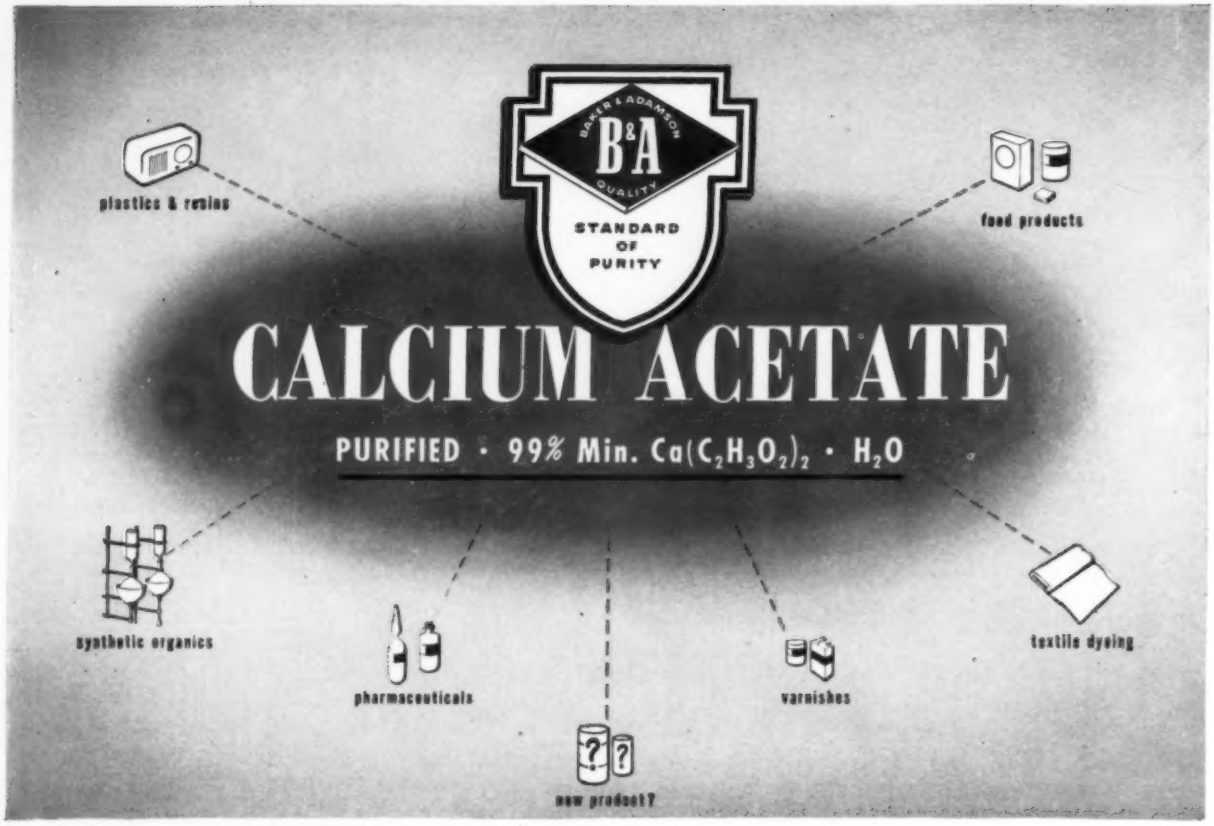

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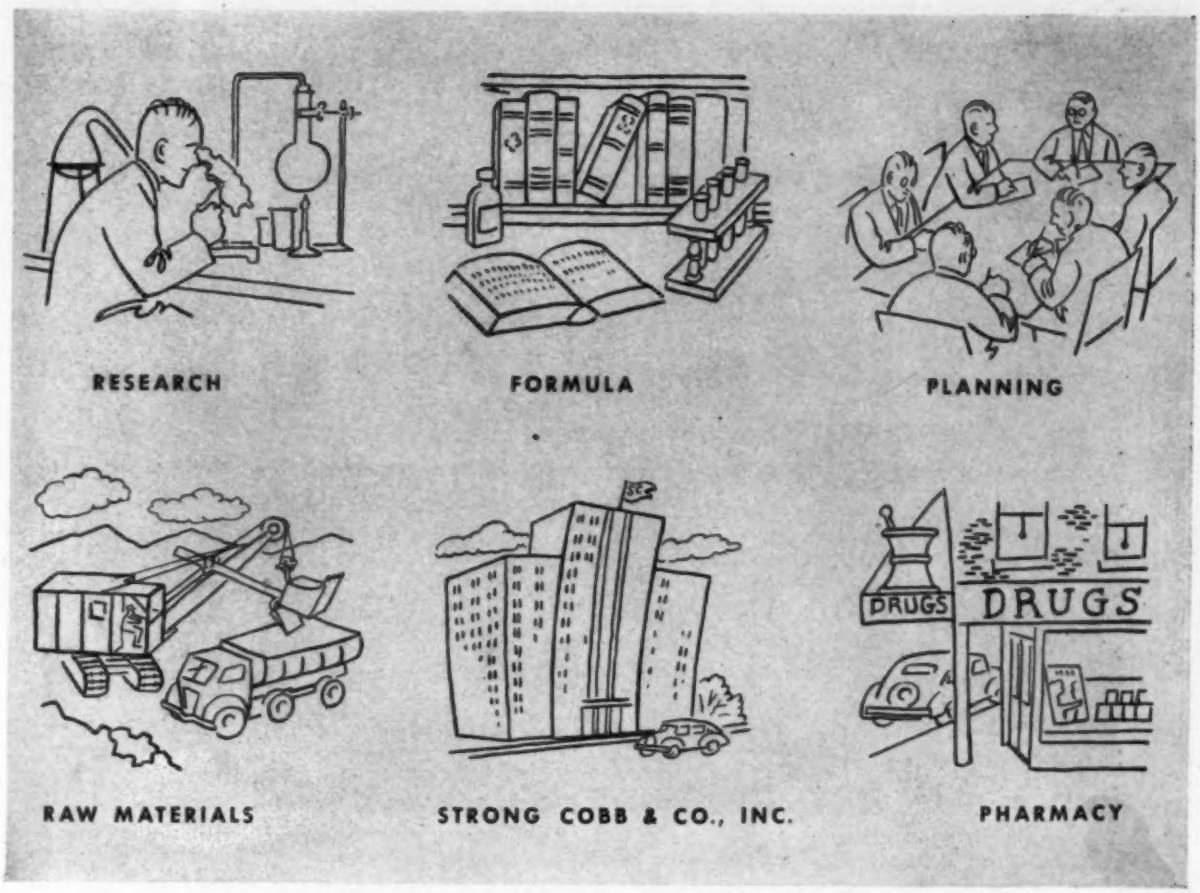

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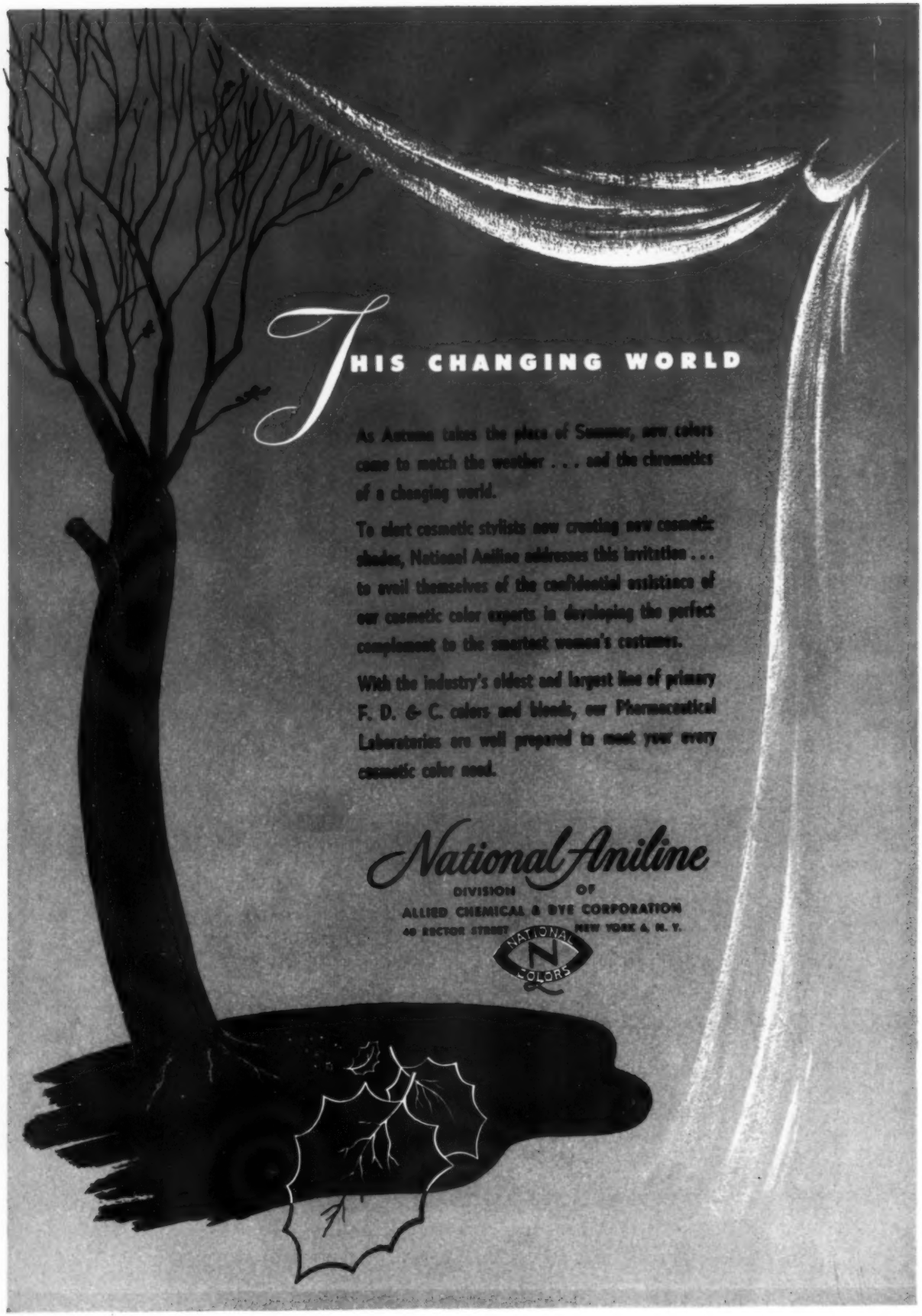
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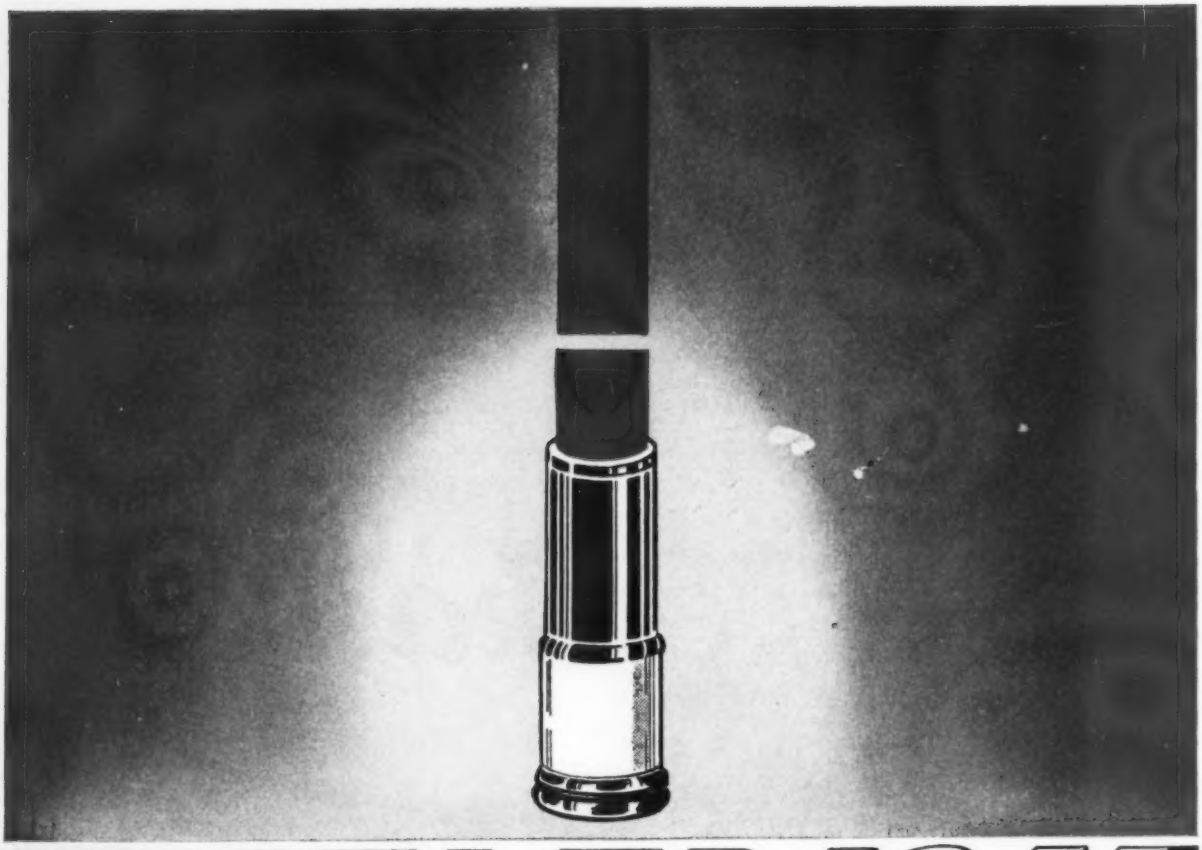

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PRODUCT	Bulk (fl. oz. per lb.)	Metallic Oxide	Acetone Extractable*	Melting Point†	Soluble or Dispersible	Special Characteristics	Uses
Aluminum Stearate Technical M [$Al(OH)_2St$]	50-55	14-15%	6.5-7.5%	190-200° C	In hot chlorinated solvents—$CHCl_3$, CCl_4, etc., mineral oils and waxes, vegetable oils, waxes and turpentine, fatty acids, cyclic solvents—benzine, naphtha, etc., and sulfonated oils. Hot solutions generally form gels on cooling.	High metallic oxide content	1, 8
Aluminum Stearate Technical D [$Al(OH)_2St$]	50-55	8.4-8.7%	6-7%	155-160° C			1, 2, 3, 4, 8
Aluminum Stearate Technical D 5-48	45-50	8.7-9.0%	6-7%	155-160° C		Especially strong gelling action	1
Flatting Agent No. 22	65-70	8.4-8.7%	6-7%	145-150° C		Good flatting action.	3
Aluminum Stearate Fluffy	60-65	8.4-8.7%	6-7%	145-150° C		Similar to Tech D but softer and more bulky.	1, 4, 8
Aluminum Stearate Technical T-D	85-95	7.5-8.0%	12.5-13.5%	125-130° C		Intermediate between Tech D and Tech T, but softer and more bulky than either.	1, 4, 9
Aluminum Stearate Technical T [$AlSt_3$]	60-65	6.0-6.5%	24-25%	105-110° C			1
Ammonium Stearate Technical	30-35	5.5-6.0% (NH_3)	decomposes	decomposes	Soluble in cold water. Decomposes in organic solvents.	A granular, free-flowing product approx. 100% ammonium stearate. Readily loses NH_3 content, leaving water-insoluble stearic acid.	1, 5, 7, 8
Calcium Stearate Technical	45-50	8.8-9.3%	1-2%	145-150° C	No		3, 4, 5, 8
Calcium Stearate Impalpably Powdered	120-130	8.8-9.3%	0.5-1%	145-150° C			3, 4, 5, 7, 8, 10
Magnesium Stearate Impalpably Powdered	105-110	7.5-8.0%	0.5-1%	125-130° C	Partially soluble hot in mineral oils and waxes, vegetable oils, waxes and turpentine, fatty acids.		1, 4, 5, 7, 8, 10
Sodium Stearate Technical	35-40	9.5-10.5%	——	180-185° C	Water, lower alcohols, mineral oils and waxes, fatty acids.		7, 10
Zinc Stearate Technical	130-140	14.0-14.5%	1-2%	112-117° C	Chlorinated solvents—$CHCl_3$, CCl_4, etc., vegetable oils, waxes and turpentine, fatty acids, cyclic solvents—benzine, naphtha, etc.		3, 5, 6, 8
Zinc Stearate U.S.P. XII	120-130	14.0-14.5%	2-2.5%	112-117° C			3, 5, 10

* Extracted with boiling acetone. † Determined in capillary tube.
Alkali salts and water content of stearates (excepting Sodium Stearate Tech.) is limited to 1% and is usually less.

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New York City Health Insurance

THE Health Insurance Plan of Greater New York is now in existence and is described as "the first large-scale, carefully planned community effort to apply sound principles to comprehensive medical care." This is the plan sponsored by Mayor La Guardia during the last years that he was in office. The plan, which has been approved as to rates by the State Department of Insurance. Enrollment is now available to groups of twenty-five or more, and at least seventy-five per cent of any unit of employees must join. The cost must be shared by employer and employee. Individual subscriptions will not be accepted.

"Each enrolled person is entitled to periodic examinations and preventive care, as well as diagnostic and therapeutic medical and surgical care in his home, at the doctor's office, or in the hospital. Maternity and pediatric services, immunization, eye examinations, and laboratory services are all part of the program and there is no waiting period."

Costs under the plan range from approximately 55 cents a week for a single person to $1.65 for a couple with unmarried children under eighteen years of age. Care includes all ailments except those requiring prolonged psychiatric treatment and others similarly impractical from an insurance standpoint.

City participation in the plan whereby New York City as an employer would enroll its employees, is being studied by Mayor William O'Dwyer. A competing plan, the United Medical Service, sponsored by state and county medical societies and now in existence, is also being studied by the city.

FTC Stipulations

THE Federal Trade Commission has been questioning the use of the words "tone" and "tonic" in the advertising and labeling of a number of products. Recently the Commission prohibited a manufacturer from using the word "tone" in statements concerning the value of a skin preparation.

A stipulation covering the claims for a tooth paste bans the expression "Automatic Breath Control." Statements that bad breath can be eliminated through use of a tooth paste or powder must be carefully worded since diseases or irritations of the nose or throat as well as stomach disturbances might be responsible for bad breath, and the breath may be in no way related to the condition of the mouth or teeth.

Other stipulations prohibit the statement that a product containing papaya is of value in ailments of the digestive system; an iron product "is effective in the treatment of anemia due to iron deficiency"; a laxative "is in any way effective in the treatment of heartburn, stomach gas, sallow or dull skin, or excess stomach acidity;" cold tablet will be of benefit in throwing off or otherwise influencing the effects of a cold "except to the extent that the product may be of value in relieving headaches or other pains thereby caused;" camphor balm is "beneficial in relieving congestion on head colds unless limited to such relief as may be afforded by its counterirritant and aromatic properties;" menthol vapor balm will "beneficially influence chest colds or other inflamed or congested conditions of the respiratory organs;" soda mint tablets will beneficially influence digestive disturbances except to the extent that they may afford temporary relief in digestive disturbances caused by an excess of acid in the stomach."

Lobbyists Under Federal Control

ANYONE who receives money for the purpose of influencing legislation is a lobbyist and these people are now controlled by a Federal law. The law provides that all such people must report all such moneys received quarterly with the Clerk of the House of Representatives. Also he must register with the Clerk of the House and the Secretary of the Senate. All this information obtained regarding lobbyists will be published in the Congressional Record. The penalties for violation of the law are quite stiff in that they provide that the first violation is a misdemeanor punishable by a fine of not over $5,000, imprisonment of not more than one year, or both, and prohibition for three years from attempting to influence, directly or indirectly, any legislation or from appearing before any Congressional committee. Violation of this prohibition will make the person guilty of a felony punishable by a fine of not over $10,000, imprisonment of not over fine years, or both.

Sarsaparilla and Testosterone

THE announcement that testosterone—the male sex hormone—is to be recovered from sarsaparilla root, is just another indication of a product used empirically that contained an ingredient of which there was no knowledge during the time the product was in vogue. Quoting from the advertisement of Ayer's Sarsaparilla reproduced here, the Deacon is saying to his wife, "Land sake, Liza, the very sight of that bottle makes me feel like another man." But since the producers of sarsaparilla preparations did not know what they had in the extract of the sarsaparilla root alone, they added other things to their preparations to make them sell. Thus Ayer's Sarsaparilla was described on the reverse of the advertising card as not a "mixture of cheap or dangerous drugs, but a highly concentrated extract of Honduras sarsaparilla and choice other medicinal roots, alterative, diuretic, and tonic; the same being united with iodides of potassium and iron." On another advertising card for this preparation, the following statements were made: "Purifies the Blood," "Improves the Complexion," "Makes the Weak Strong."

The decline of sarsaparilla root is to be compared with the present attitude of the Food and Drug Administration in declaring many botanical drugs as therapeutically worthless. Doubtless they would so classify sarsaparilla root prior to the present discovery. It is also to be compared with the time before the discovery and recognition of vitamins, that the American Medical Association claimed that cod liver oil—used empirically for many, many years—had no value other than the food value resulting from its fat content.

Tamer Perfumes Forecast

IN a publicity release for a new perfume we read: "There is a new trend in perfume . . . the melodramatic vogue for alluring scents like—Rapture—Passion—Loves Dream—Night of Love—Ardour—et al, has simmered down. Good taste is reasserting itself and the woman of discretion is choosing a scent that while it is disturbingly haunting, is less violent in its appeal." We don't really know, but maybe this is a post war trend. Perhaps the violence of the war time perfumes was due to the shortage of available men and now that the men are back, such extreme power is no longer required of perfumes. However, we are glad to see the power of perfumes lessened as we were becoming quite worried about what this power might do the morals of the younger generation. Then again, the milder scents will take longer to accomplish their purpose and this means for greater consumption.

OPA Removes More Items from Control

OPA revised SO-127 effective August 20, establishing exemptions and suspension of certain commodities from price control. Articles of interest to this industry are: Hair straighting combs, perfume atomizers, cosmetic cases, bob pins, fitted toilet set cases, lipstick and rouge containers, hairpins, leakproof perfume dispensers to be carried in purse, shaving brushes, toiletry and cosmetic bottles, household brushes (such as scrub, wire, tooth, hair, cosmetic, etc.), soap dispensers, beauty-shop furniture, fixtures and equipment (except office furniture), electric and hand-operated hair clippers, permanent wave machines, permanent waving kits (consisting of cold waving lotion, plastic curlers, end papers, neutralizing powder), bentonite, China clay, kaolin, kieselguhr, pumice, agar agar, osage orange extract, sodium bicarbonate, sodium chloride (salt).

World Health Organization

THE world Health Organization constitution, signed by representatives of 63 nations, confers upon this organization authority to adopt regulations concerning standards, advertising, and labeling of drugs in international commerce. U. S. Surgeon General Thomas Parran hails the charter as the "Magna Carta for health". This charter gives WHO unprecedented powers to act as the directing and coordinating authority on international health activities. The constitution was adopted at the closing session of the International Health Conference, which had been convened by the United Nations Economic and Social Council for the creation of WHO. Only the United Kingdom and Chinese delegates accepted the constitution on behalf of their governments. Other nations require ratification by the legislatures of the respective countries. Formal acceptance by 26 nations will be necessary to bring WHO actually into being.

Of particular interest to this industry in the constitution is Article 21 of Chapter V, which reads:

"The Health Assembly shall have authority to adopt regulations concerning:

"Standards with respect to the safety, purity, and potency of biological, pharmaceutical, and similar products moving in international commerce:

"Advertising and labelling of biological, pharmaceutical, and similar products moving in international commerce."

Under the functions of the organization it is provided that the organization is authorized to "develop, establish, and promote international standards with respect to food, biological, pharmaceutical, and similar products." Also "to promote cooperation among scientific and professional groups which contribute to the advancement of health; to promote improved standards of teaching and training in health, medical, and related professions; to promote and conduct research in the field of health; to propose conventions, agreements, and regulations, and make recommendations with respect to international health matters."

Speaking of the organization's authority to aid in research and in disseminating scientific knowledge Surgeon General Parran stated: "In recent years we have seen miracles which can be accomplished by the sulfa drugs and penicillin, yet only a small portion of the world's population had access to these remedies."

FTC and Vitamins

WE CAN'T quite recover from reading parts of a recent complaint filed by the Federal Trade Commission against a manufacturer of a vitamin preparation. The paragraphs read:

"The complaint alleges as exaggerated and misleading the respondent's representations and implications that it is necessary to supplement the diet with an adequate amount of synthetic vitamins; that failure to do so results in a large number of serious pathological conditions, all of which are symptomatic of vitamin deficiencies; and that the consumption of the respondent's vitamin preparations in the dosages suggested by him guards against deficiency diseases, strengthens resistance to infection, improves appearance and personality, and assures top peak of strength and vigor. The complaint charges that the consumption of vitamins will not accomplish such results, and continues:

"'. . . severe chronic vitamin deficiencies, including such diseases as pellagra and scurvy, are of rare occurrence in the United States; if mild cases of deficiencies are found by physicians, they are more properly treated by a carefully selected diet and, if necessary, the administration of recognized therapeutic dosages of vitamins. The numerous symptoms set forth by respondent are far more frequently due to causes other than vitamin deficiencies. The average American diet, both with respect to variety and quality, assures a sufficient supply of vitamins; and the insistence upon purchasing large amounts of vitamins may result in a failure to obtain a properly balanced diet which latter is more important than a diet supplemented by respondent's products.'"

The complaint also states: "and declares to be misleading and unwarranted his suggestion that the cooking of food destroys such large quantities of vitamins that a supplement of synthetic vitamins is necessary."

The argument that "the average American diet, both with respect to variety and quality, assures a sufficient supply of vitamins" is certainly not a sound one. It is well known that an extremely large segment of the population of this country are not able, or do not wish to, eat the year round the variety of foods in sufficient quantities to obtain the proper amount of vitamins necessary for optimum health and well-being. Furthermore, doctors do not always recognize a vitamin deficiency when it is in the incipient stages. Furthermore, we fail to see why the Commission sticks out its neck in refuting the respondent's statement regarding cooking destroying vitamins, since it has been proven over and over again that cooking does destroy vitamins. Looks to us like the fine hand of Dr. Durrett, medical advisor to the Commission, plus the Commission's continued desire to "push around" people engaged in this industry.

Television for Bristol-Myers

WE NOTE with interest that Bristol-Myers is to sponsor two television broadcasts. It is interesting to see Bristol-Myers still out in front in the use of radio in its present and future forms, but after all, the Ipana Troubadors did a wonderful job for Ipana when ordinary radio broadcasting was quite new.

Therapeutically Worthless

THE Food and Drug Administration, in seizing a preparation, made claim that one of the ingredients, hydrastis, has "no therapeutic value." Thus another botanical drug is added to the already long list of botanicals which the FDA claims to be worthless. Manufacturers must get to work and prove, if they can, that the ingredients of their preparations have therapeutic value. Perhaps the reasearch necessary to prove the value of the ingredients might be long and costly, but if they don't want to prove the value of their preparations by scientific facts, why don't they quit the industry—they will have to anyway if the FDA statements cannot be successfully refuted. Furthermore, in these columns is a reference to the value of sarsaparilla root, which product was once widely used, but which we eventually abandoned because nobody knew the value of its ingredients. Now, some fifty years or more later, the value of sarsaparilla root is coming to light. It ties in also with the time when the American Medical Association claimed that cod liver oil had no merit other than its fat content—vitamins were then unknown.

Botanical Imports Up Sharply

BOTANICAL drug imports in 1945 were valued at $33 million, says the Office of Pharmacal Information, which states that in 1946, entries are leading 1945 imports two to one, predicting that new import records will be established this year. As the wartime barriers are removed, all 300 of the natural drugs, spices, and gums used in packaged medicines and pharmaceuticals produced in this country, are expected to be available by 1947. Botanical shipments received in the first quarter of this year totaled 6,726 tons, compared with 2,973 tons for the first quarter of 1945. Imports of botanicals were valued at $15 million in 1940, $15 million in 1943, but leaped to $32 million in 1944, and $33 million in 1945. Despite this sharp increase in imports, only eleven of twenty key herbs are now arriving in prewar volume. Sumatra benzoin, European colchicum seed, and Chinese Ma Huang are still in short supply as a result of the war.

Soviet Drug Production

SOVIET Union pharmaceutical research organizations will spend more than 13 million rubles in 1946 for the development of new drugs. Synthetic hormones are among the new products to be made in Russia, a pilot plant being expected to be in operation some time during the current year. This work is under the direction of the Pharmaceutical Institute of the Soviet Academy of Medical Science. Penicillin production this year is expected to be three times that of 1945, output of phenacetin is expected to be twice that of 1945, and stabrin production is expected to rise by 50 per cent. Aspirin, sodium salicylate, salol, and sulfa drugs are constantly increasing in volume of production.

Production of thiocol and guaiacol will soon be resumed in a Leningrad plant. Menthol, lead-bismuth preparations, and resorcinol are slowly coming back into production. Output of infusions, drops, ointments, plasters, methyl caffeine, bismuth preparations, and ether is lagging, supplies being well below demand.

Average Tooth Brushing

REAL downright research has been conducted to find out how people brush their teeth, and it has been determined that the average American takes approximately 267 strokes to brush his teeth. And about one of each three persons is real naughty and uses the crosswise method of brushing universally condemned by dentists. Also the number of strokes taken ranges from a low of 40 by a 55-year-old woman to a high of 798 by a 22-year-old man. Also the disobedient people only consume an average of 67 seconds in brushing, which is only about one-third of the three-minute period recommended by dentists. Strokes averaged 4.7 per second, if that's of any vital importance to anybody.

Dr. Hamilton B. G. Robinson, of the College of Dentistry, Ohio State University, St. Louis, made these observations in a real trickey way, in fact he did it with mirrors. He used a half-silvered mirror and special lighting" which enabled him to watch persons brush their teeth without knowing they were being observed"—pretty sly, eh? Of course Dr. Robinson had a reason for conducting this important research, to wit: "The production of abrasion on the hard tissue of the teeth depends, in part, on the number of strokes used in brushing. If one can ascertain the number of strokes required to produce defects under laboratory conditions and data are available on the number of strokes used by the average person, the relative tendency of a given dentifrice to produce abrasion can be estimated." Sounds to us like stuff promoted by an advertising agency. We just hope that someone interested in the average consumption or number of strokes of tissue doesn't sneak up on the average American with mirrors.

Meat Price Control and Glands

THE return of price control over meat indicates that meat supplies will for the greatest part will move through black market channels rather than through the hands of the established packers and wholesalers of meat. This means that supplies of grandular products will dwindle sharply because these products are now recovered by black market operators, but rather are completely wasted. Dr. David J. Klein, head of Wilson Laboratories, recently explained why it is impossible for the black market operators to save animal parts so essential as medicinal agents. Said Dr. Klein:

"Take the pituitary gland at the base of the animal's skull. To get it, the skull must be split, the brains taken out and another small inside skull—the scella turcia—must be split before it can be obtained. The gland must be taken out and trimmed with the skill of a surgeon. If it is not timmed properly much of its value is lost. The gland must be put instantly into a cooler. In the laboratory it goes through elaborate processing, including dissection, in being made into pituitary extracts. The extracts are used in connection with childbirth and abdominal surgery.

"The suprarenal gland is found just above the kidney. It must be taken out quickly and must be frozen immediately to retain its potency. Persons suffering from Addison's disease must have the medicine from this gland to live. From the suprerenal gland is made epinephrine used to raise the blood pressure, stop bleeding, and so on.

"From swine the pancreas, situated just above the liver, must be removed skillfully and chilled at once. Insulin is made largely from the pancreas of swine and I need not say how important it is to maintain adequate supplies of this product in order that hundreds of thousands of persons suffering from diabetes may live."

Dr. Klein said that the knowledge and skill necessary to preserve the essential animal glands is emplanted in employees through years of education and reeducation.

Proprietary Assn. Convention

IF THE majority of its members agree to the proposition, the Proprietary Association will join join the parade of those associations of this industry who hold their conventions in resort hotels rather than in a hotel in a large city. For many long years this association has met yearly at the Biltmore Hotel in New York, with a couple of ventures to the Traymore Hotel in Atlantic City. At these meetings people do not really meet and get to know one another as is the case when the meetings are held at resort hotels where everyone is housed together with all of the time spent in the hotel and its environs. Some years back, when the late Frank Blair (president of the association for over twenty years) was recovering from an illness at the Greenbrier Hotel at White Sulphur Springs, the meeting was held at that hotel. To our mind, this was one of the most successful and enjoyable meetings. We sincerely hope that the membership votes to move the meetings out of town to resort hotels because we feel certain that it will greatly benefit the membership of the association and the industry.

Can Production to Rise

THE can manufacturers of the country are expanding their production facilities 20 per cent to care for the rising demand, says the Can Manufacturers' Institute. Technical advances made during the war years have resulted in much saving of tin. This will offset the shortage of the metal and therefore permit the increased production.

The New Jersey Board of Pharmacy has promulgated regulations prohibiting the refilling of prescriptions containing barbiturates. Persons holding prescriptions for these drugs can have them filled only once and will have to obtain a new prescription to obtain a second supply. The regulations followed the revelation of twenty-nine death certificates showing deaths from these drugs in 1945.

Cosmetics and Antimalarials

ORGANIC chemists are scratching their heads at the appearance in the July issue of the "Journal of Organic Chemistry" of four papers on antimalarials by Dr. J. Schultz and co-workers, done in the cosmetic research laboratories of the Lady Esther Co., of Chicago. The project was carried out in collaboration with the U. S. Public Health Service and is another illustration of the part which the technical section of the cosmetic industry played in the war effort. Dr. Schultz, who was associated with New York Quinine & Chemical Works prior to his association with Lady Esther, is now research director of N. Y. Q.

The War Surplus Mess

WHY the disposal of war surplus goods is such a sorry mess is not definitely known, but money seems to be the answer. When the full story is revealed by Congressional investigations, it will be too late to do anything and a lot of people will have gotten away with a hell of a lot of valuable materials, and a whale of a lot of money will have been made and cached away.

The latest complaint comes from the Brand Names Research Foundation which organization protests against "downright blackmailing" of manufacturers of branded consumer goods reportedly being purchased from war surplus stocks by veterans who act as "fronts" for brokers, who in turn offer damaged goods to manufacturers at increased prices. Although the law requires that veterans own at least fifty per cent of firms buying war surplus stocks for resale, many ex-service men are known to have purchased goods which later turned up in the hands of persons with whom they had no established business connection.

Manufacturers have in many instances been approached by brokers seeking to resell quantities of their product at prices as much as fifty per cent greater than the Army and Navy paid for them, the Foundation says, adding that "since much of this merchandise is no longer in first rate condition, the manufacturers have paid the price demanded as a means of self-protection.

"This amounts to downright blackmailing of the manufacturers, whose brand names are their most valuable asset—the insurance to the customer that the article he is buying is of the same quality and workmanship he has come to expect through years of acquaintance, and that the company owning the trade-mark stands behind the merchandise one hundred per cent."

Hundreds of brand-identified consumer products are being offered for sale by the Government, sometimes after having been shipped overseas and back and greatly damaged by weather, climate, bad storage, and rough handling, and are being offered for sale by unscrupulous dealers who often pass them off as new goods, or at "bargain" prices, says the Foundation. Repeated requests that the War Assets Administration take some action to permit manufacturers of name brand products to repurchase war-damagee stocks in order to keep them off the market, as is done in Canada, have failed to elicit cooperation, the Foundation says.

Glycerine and OPA

DURING the suspension of the OPA, glycerine advanced from an OPA ceiling to 21 cents on the part of at least one producer, and to 55 cents on the part of two other producers. With resumption of the OPA it went back to 18 cents. When asked if the 55 cent price was justified from any other angle except the shortage and "all the traffic will bear," our informant said, "Well, imported glycerine sells at 70 cents."

Adulterated Citronella Oil

THE Government is not satisfied with the decision under which Procter & Gamble were allowed to import duty free citronella oil containing a mixture of as much as 6 per cent to 13.5 per cent of petroleum distillate and is appealing to the Court of Customs and Patent Appeals to have the oil declared dutiable as a compound. The Government contends that: "The presence of the petroleum distillate in the imported merchandise is no accident. It is not a natural impurity nor is it added to preserve the oil, facilitate its shipment, or otherwise make it a more merchantable product. On the other hand it is an adulteration and added here to such an extent that none of the appellee's witnesses could describe it as the commodity they buy and sell as citronella oil. Consequently, both literally and for tariff purposes too, it is not described as an essential oil, but as a mixture or combination of which an essential oil is the principal ingredient."

Streptomycin Distribution Set Up

CIVILIAN distribution of streptomycin has been set up in the initial stages by CPA. Under the plan put into effect September 1, approximately 1,600 depot hospitals throughout the country are receiving limited amounts of the drug. The plan is similar to the one originally used for the early civilian distribution of penicillin. Major producers are required to report to CPA the total amount produced, and they must clear all orders through CPA. The price has been sharply cut from $25 per gram, which price prevailed during the clinical investigation stage, to $16 per gram now the drug is being produced in greater quantity and made available to civilians.

Androgens, Impotence and the Climacteric

A MINIMUM dosage for therapeutic effectiveness has been placed upon androgenic substances by the Food and Drug Administration, Commissioner of Foods and Drugs Paul B. Dunbar having issued the following notice:

"Articles which have appeared in the current literature, together with information obtained by the Food and Drug Administration from endocrinologists, indicate that androgenic substances prepared for subcutaneous and intramuscular administration of a potency less than 5 milligrams (250 Capon Units) per dose are of no therapeutic value when used for such conditions as male climacteric, impotence due to lack of androgens, and other conditions for which these preparations are usually recommended. These facts should be taken into account in preparing androgenic drugs for distribution within the jurisdiction of the Federal Food, Drug, and Cosmetic Act."

Penicillin Export

FOR the first time in the history of the industry, a drug product has sold in foreign markets at twice the rate of domestic sales. The product achieving this record is penicillin, for which export sales in July more than doubled sales in the United States. Furthermore, the export sale of penicillin in July was ten times the export sale of all drugs and medicines in the United States in an average month in 1938.

July allocations for export approved by the Civilian Production Administration totalled 1,350 billion units of injectable penicillin.

A PEEK AT THE FUTURE

Indications point to improved status of Drug and Pharmaceutical industry despite present abnormal conditions.

THE TIME is rapidly approaching when the post-war world is going to settle down. The terrific pace at which industry in general was moving during the war days did not slacken, but rather accelerated with the coming of the surrender of our enemies, and we moved into the greatest industrial boom of all time. Now the signs are beginning to appear that a recession is just ahead, and with the coming of this recession, the country will begin rapidly to adjust itself to what might be considered more "normal" times and conditions.

The reasons for the approach of this situation are clear. This country is still badly in need of many things to replace those worn out during the war years when nothing could be replaced. But people generally realize that when they buy unknown makes of various products, or when they buy homes at today's terrificly inflated values, they are acting in a foolish manner. Therefore, by and large, they are not buying these things unless they are desperate. This is resulting in a backing up of products of unknown makes and this backing up tends to take part of the edge off the boom and bring about a softening up process all along the line. For when these hitherto unknown manufacturers start cancelling orders for raw materials and firing help, those who watch the signs closely begin to hedge and to curtail. And once the present high income of the country declines due to these curtailments, then the money is not available for spending out of current earnings and must come from savings—something that a large number of people are willing to dissipate only in time of great stress.

Not only are there signs that demand in this country might slacken for these reasons, but there are signs that demand here might slacken for the reason that foreign demand might decline in an increasing number of lines. Already, agricultural markets are exhibiting a downward trend due to the restoration of crops in foreign countries. Shortly, industrial production abroad will begin to exert an influence on the demand from this country. One example in this industry is the coming into production of a very large penicillin plant in England, which plant is reported to be affecting our export situation in this important drug. As time moves on, it is a foregone conclusion that Great Britain, Russia, and the continental countries will start to produce in a big way and then our present unfillable export demand will melt away and we will be up against keen competition in the export markets of the world. But that period still appears to be some time ahead and is not immediately concerned with the signs which are appearing at the present.

The cosmetic branch of this industry—particularly because it is staggering under a tax of twenty per cent at retail—should be quite vulnerable to a recession. First of all, strenuous efforts must be made to have this tax removed. For after all, if people are to buy in a recession, they are going to look for value for their money, and one is hardly obtaining value when he is paying a twenty per cent tax to the Federal Government on his purchases. Furthermore, the cosmetic industry is now composed of many more manufacturers than before the war, and many of these will be classified by distributors and consumers as "unknowns." Therefore, when the goods of the long established cosmetic manufacturers can be obtained freely, these unknown manufacturers will suffer to a greater degree than will the older houses whose names have been familiar for a great many years.

It is true that the use of cosmetics has broadened widely during the war years and the immediate period following the war. This occurred because many more women went to work and therefore felt the need for good grooming and also had the money to spend upon these items. A greatly increased number of women have learned to use cosmetics properly and they do not want to be without them. However, when they do not have so much money to spend on cosmetics, they will

buy the lower priced brands. For this reason it is anticipated that when a depression comes, the number of units of cosmetics sold will not decline at anywhere near the rate at which the dollar volume of the industry will decline.

Manufacturers of cosmetics must take cognizance of this impending situation and be ready to change their tactics if they wish to keep their relative position in the industry, or in fact, if some of them want to survive. It is one thing to do business when anything that is turned out can be sold because of a general shortage of merchandise brought on during the war years by rationing of supplies, and brought on later by an abnormal boom state of affairs, but it is quite another thing to do business when goods are plentiful and incomes are sharply lower.

The broadening of the market into men's lines, teenage cosmetics, and cosmetics for the still younger children will doubtless add to the gross sales of cosmetics over future years. But these lines have appealed on a strictly gift basis and when other merchandise is available at proper prices for the gift market, cosmetics cannot be expected to continue to sell these items in anything like the present volume. Likewise when durable goods are available freely at proper prices, income that is now partially being spent for cosmetics will be syphoned off for the purchase of these durable goods.

The drug manufacturers likewise will feel the recession when it comes although they are not as vulnerable as are the cosmetic manufacturers. Here is involved the matter of the condition of the health of the people as a strong deciding factor in the extent of the market, although when national income is high or low it still has an effect upon the volume of sales of the industry regardless of the state of health. But drug manufacturers are bound to feel the effects of improved production conditions in foreign markets, especially upon their export trade. However, this effect will not be as great as it was before the war for the reason that American goods have made a name for themselves during the war years when medicines from other countries were not available in these foreign lands.

Drug and pharmaceutical manufacturers will not feel the recession as seriously as other industries for the reason that there have been developed during recent years a host of efficacious products that were not available before and which the doctors are using and prescribing widely. So we find that the drug and pharmaceutical manufacturing is on a new high plane, and that it is standing on a much wider base than ever before in history. Naturally, its activity today—in trying to supply the abnormal domestic and export demands—will lessen, but it will never recede to the point at which it stood prior to the war. The fact that its activity today is about at the peak despite the elimination of war orders, clearly indicates that the industry will not recede to the levels of 1939 and previous years. In this issue we have published a review of most of these new products which the industry is now producing. A study of this review will give one the picture of the advanced state of the industry and will prove the conclusions which are drawn here.

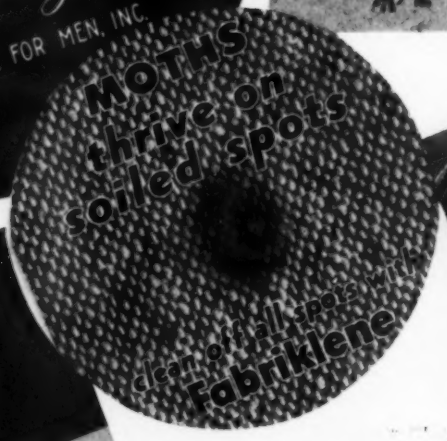
All in all, this industry can be certain that a recession will happen, and perhaps it will happen sooner than some people have anticipated. However, this industry stands in a much firmer position than ever before in history and while the recession will affect it, the extent to which the industry will be affected will not be nearly so great as the influence it will have upon other industries. Manufacturers must watch the signs and follow the trends if they hope to maintain their relative positions in the industry, and if they hope to maintain their profit margins. Other than that there is nothing that can be done because abnormally high business years which keep production bursting at the seams cannot continue any more than abnormally poor business.

WOOL GREASE DERIVATIVES: We have been reading the very interesting article on lanolin. We have been interested in a very old and ancient preparation, known to the Greeks as Oesypus. Suintu and Yorkshire Grease are probably the same names for this preparation Can you give us any information on this particular form of pre-Lanolin or any articles or literature on same?

Suintu probably is "Suint." Suint is the water-soluble portion of the impurities in sheeps fleece. The impurities which wool contains consist largely of the natural grease (e.g. wool wax) exuded from the skin of the sheep and technically known as the "yolk," the dried up perspiration from the body of the sheep, technically called "suint," and dust, dirt, burrs, etc.

Referring to the second part of your question, it should be explained that in many plants in Yorkshire and elsewhere, the dirty soap liquors obtained in wool-washing are not allowed to run to waste, but are run into tanks and there treated with sulfuric acid. The effect of this treatment is to decompose the soap, and the fatty acids along with the wool-grease rise as a magma to the surface.

PACKAGE INSERTS



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irritations, surface
ds, chronic ulcerations.

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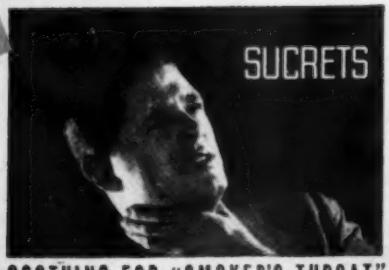

SOOTHING FOR "SMOKER'S THROAT"

A FIRST CLASS MEDIUM THAT REACHES CUSTOMERS --- NOT PROSPECTS

Most of us are circulation minded. We tend to think in terms of "how many will read or listen to my message?" As a result—Radio rates are based largely on the listening audience to a particular station at a given time; and Magazine rates are set on the basis of copies sold.

Unfortunately, however, not all listeners to a radio program or readers of a magazine are prospects. This means that the actual cost to the advertiser of reaching those people who can and will be influenced to buy, is usually many times more the set rate. This is not the case with package inserts. The product is in the hands of the purchaser. It is a circulation that you own and control.

During the last few years we have been in the midst of a sellers' market. It has required little effort to sell products. The consumer has not been quality, price or service minded. He just wants the goods. With the wheels of production now grinding away the sellers' honeymoon may come to an abrupt end. The time may not be immediate, but it is as certain as a change in New England weather that the day will come. It is hoped that many of us will have prepared for that time. With plenty of goods available, and money not so plentiful, sound selling technique will again come into its own. The package insert, carefully designed and followed up, is an example of a fundamental selling principle that is especially valuable in meeting competition in a buyers' market.

A study conducted several years ago by the S. D. Warren Company, paper manufacturers, emphasized that the package insert circulation is especially valuable because it reaches customers, and not prospects. Insurance companies are said to have learned a long time ago that present policyholders are the best prospects for additional insurance. Some publishers, too, have found that current subscribers to a publication are also first class prospects for a new magazine put out by the same group. Among the advertising and selling messages that may profitably be carried in package inserts the S. D. Warren study found these:

1. Refresh the mind of the buyer concerning the points that induced his first purchase of your product.
2. Tell the buyer how to use your product to the best advantage.
3. Tell the buyer of all the uses to which the product may be put.
4. Tell the buyer how to care for the product so that it will give the best service.
5. Acquaint the buyer with other products that you make or sell.
6. Secure names of buyers for mailing list.
7. Induce the buyer to send for samples of other products that you make or sell.
8. Secure the names of friends and acquaintances of buyers for mailing list or for distribution of samples.
9. Bring suggestions or information that will help

(Continued on page 422)

MEDICAL SCIENCE TOLD ME MY CASE WAS HOPELESS - BUT - I DEVISED THESE AMAZING METHODS OF AVOIDING HAYFEVER!
AIR FILTER
THE HEAD-IN-A-TOWEL METHOD
DEEP SEA-DIVER METHOD.
I GOT THIS IDEA FROM THE OSTRICH (NOT SO GOOD)
GREEN SOAP
THIS WAS THE SIMPLEST METHOD
MY FILTERED AIR METHOD
MY LOPHANE METHOD
No cartoonist's "method" can approach the relief of nasal congestion afforded hay fever patients by Privine, in liquid or jelly form. The use of Privine brings about prompt vasoconstriction with long-lasting symptomatic relief. Small dosage, as prescribed by the physician, aids the patient in performing his normal work routine and does not interfere with restful sleep. Privine Hydrochloride and Privine Jelly are available at all druggists.
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NEW DRUGS FOR ALLERGY

By M. A. LESSER

NO ONE knows exactly how many people sneeze and itch, wheeze and weep, cough and gasp because of hay fever or other kinds of allergic sensitivity. Estimates range anywhere from 15 to 20 per cent of the population, or between thirteen to twenty million people in this country. However, there is hope that many of these sensitive souls will be able to obtain relief of their distressing symptoms through the use of newly developed drugs like "Benadryl," "Pyribenzamine," and "Anthallan."

These drugs serve only as palliatives. They do not cure the condition; desensitization to the offending substances being necessary to obtain permanent results. Nonetheless, allergists[1] feel that these drugs should be of considerable value for the control of symptoms while allergic investigations are being carried out. Since the determination of the cause and subsequent cure of an allergic condition is often impossible or at best a long and painstaking procedure under present methods,[2] the new agents often fill a dire need for many sufferers. Indeed, it is felt[3] that in those patients able to tolerate the drugs, it may sometimes be possible to ignore the diagnostic problem.

Although Benadryl and Pyribenzamine differ chemically, they have a common basis in that they produce their effects through an antihistamine action. Anthallan may have a similar effect, but its action cannot be explained completely on this basis.[3] As remarked by Epstein,[4] the use of antihistaminic substances is based on the assumption that histamine plays a role in their causation. Back in 1911, Dale and Laidlaw[5] presented the histamine theory of anaphylactic shock. Since then, and especially during recent years, further evidence has been accumulated to support the histamine theory of allergic manifestations.[6-10]

Although the subject is still being investigated, there is growing acceptance of the view that the release of histamine or a histamine-like substance (e.g. "H" substance) is involved in urticaria, hay fever, asthma, vasomotor rhinitis, allergic dermatitis, serum reactions and other allergic conditions. It is known that dilitation and increased permeability of the capillaries of the skin and mucous membranes are important pharmacological actions of histamine. Increased capillary permeability results in a seepage of fluid through the capillary walls to produce localized edema, which, together with erythema and pruritus, constitute the principal symptoms of urticaria or hives. Another important action of histamine is contraction of the smooth muscles of the bronchi, blood vessels, intestines and uterus. Histamine also acts as a secretogogue; stimulating the lacrymal, nasal, pulmonary and digestive secretions. In the skin, histamine acts on the cutaneous endings of nerves to produce pain.[11]

Using as an example an individual that has become allergic to ragweed and presents symptoms of hay fever, Epstein[4] has presented a rather simplified explanation of when and how histamine enters the picture: The individual becomes sensitized to the antigen or allergen, in this case the ragweed pollens. The sensitized person

produces specific antibodies to this antigen and fixed antibodies settle in the mucous membranes of the nose and conjunctiva. These tissues thus become the so-called "shock organ" and determine the localization of future clinical manifestations of hay fever. Upon renewed exposure to the antigen, an antigen-antibody reaction occurs at the shock organ. This reaction in turn leads to release of histamine, which causes inflammation of the shock organs, conjunctiva and nasal mucosa so that the typical clinical symptoms of hay fever are produced.

This train of events also indicates the various means by which allergic conditions may be treated. Thus, the most common methods are designed to prevent the antigen-antibody reaction by avoidance or elimination of the antigen. This would be a pollen in a case of hay fever or a particular food in an instance of food allergy. Where such avoidance is impossible or impractical, various methods of desensitization may be tried. Unfortunately, there are many cases where such methods cannot be used or where failure results. In such instances, usually all that can be done is to alleviate the symptoms.

Acceptance of the histamine theory has opened new avenues of approach to the problem of attacking allergic diseases. For example, early workers attempted to desensitize allergic individuals to histamine itself by injecting minute doses of this substance.[12] Other trails were followed, but on the basis of results obtained it seemed rather futile to search for substances that would prevent the liberation of histamine. Hence research workers began to investigate the possibilities of histamine antagonists or antihistamine agents.

Work along these lines may be said to have begun during 1937 to 1939, when Staub and Bovet[13, 14] of the Pasteur Institute in Paris observed that certain aromatic derivatives of aminoethanol and ethylenediamine exhibited marked antihistaminic activity in guinea pigs. Because these original compounds were too toxic for clinical use, the search was continued and compounds more suitable for human use were found.[15] Clinical studies[16] confirmed the effectiveness of one of these compounds in various allergic diseases. This product, dimethylaminoethylbenzylaniline, has been marketed in Europe as "Antergan" and has been found to be effective in some cases of asthma, hay fever, serum sickness, urticaria, migraine and other conditions.[4, 10, 17]

Continuing this line of investigation, American workers developed and studied other antihistamine compounds. For example, Mayer and his associates[18] studied a series of compounds and came up with the discovery that the product now called Pyribenzamine possessed high antihistaminic activity. Somewhat earlier, Loew and his coworkers[19, 20] had demonstrated that the new chemical, called Benadryl, was an efficient histamine antagonist of low toxicity.

To date, Benadryl is undoubtedly the most thoroughly investigated of the newer drugs for allergy. Chemically it is beta-dimethylaminoethyl benzhydryl ether hydrochloride. A white crystalline powder, soluble in water and alcohol, and stable under ordinary physical conditions, Benadryl has been subjected to extensive laboratory investigation.[19-22] The results of these experiments indicate that this drug is a powerful antagonist to many of the pharmacalogic actions of histamine including its effect on the smooth muscle of the bronchioles and intestines of the guinea pig. It has been found to be very effective in relieving anaphylactic shock in these animals and in preventing death from bronchiospasm following fatal doses of histamine. According to Loew and his associates,[22] Benadryl probably antagonizes the relaxing as well as the contracting effect of histamine on vascular smooth muscle.

Benadryl appears to exert its action through its ability to envelop the cell and prevent the entrance of histamine. Wells and his associates[21] are of the opinion that Benadryl probably acts by being absorbed onto the site of action of histamine and thus the histamine has much less chance to reach and combine with its site of action. In other words, there is a sort of competition between histamine and Benadryl for a given site of action or receptive substance. Such a mode of drug antagonism is not new and has been observed with other substances. Thus it may be said that Benadryl destroys counteracts, blocks, or otherwise prevents some of the actions of histamine. In so doing it relieves many of the symptoms or conditions ordinarily brought on in allergic individuals through the release of histamine or a histamine-like substance.[11]

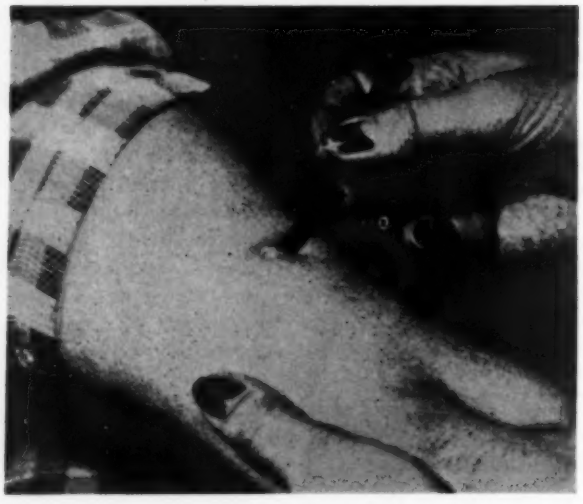
Much work has been done to demonstrate the clinical efficacy of Benadryl in treating various allergic diseases. It may be given orally or by injection. For oral use, by far the preferred method of administration, Benadryl is supplied in capsules containing 50 mg. of the drug, or as an elixir containing 4 mg. per teaspoonful.

The value of Benadryl in the treatment of hay fever has been reported by a number of clinicians. In some series, really outstanding results were obtained, but in others the ratio of cases benefited was not quite so high. For example, McElin and Horton[23] obtained good to excellent results in 22 of 23 cases of hay fever. More recently, Barnett and his associates[24] reported that of 41 cases with this condition, 40 showed complete relief or very marked symptomatic improvement. Koelsche and his coworkers[25] observed that 75 per cent of the cases treated with Benadryl was benefited. Levin,[1] however, states that only 59 per cent of hay fever patients receiving the drug reported good symptomatic relief, but when relief occurred it was usually prompt and definite, within twenty to thirty minutes.

Benadryl has given much better results in hay fever than in cases of asthma.[11] In one series of cases[25] only 33 per cent of patients with bronchial asthma were benefited, but where asthma was associated with hay fever, relief was obtained in 74 per cent. In another series,[10] the administration of Benadryl gave symptomatic relief in 40 per cent of the patients. One group of workers[24] feel that their results in 13 cases of asthma are inconclusive; 6 patients revealed definite improve-

ment, 2 felt worse, and 5 reported no improvement. Although 65.5 per cent of his cases of asthma were relieved by Benadryl, Levin[1] found that the drug is not very effective when the asthma was precipitated or complicated by a respiratory infection. A rather high proportion of his asthmatic patients showed undesired side reactions to the drug; children showing a greater tendency to these undesired effects. In four cases, the drug aggravated the condition.

Variable results have been obtained with the use of Benadryl in the treatment of vasomotor rhinitis or allergic rhinitis, a condition caused by non-pollen allergens like dust, animal danders and such. Thus, Williams[26] observed relief of symptoms in 10 of 12 patients with perennial vasomotor rhinitis with the drug, and McElin and Horton[23] obtained similar effects in 6 of 7 cases. Analysis of results of 28 cases of vasomotor rhinitis treated with Benadryl by Barnett and his coworkers[24] revealed 7 cases to be symptom-free, 17 cases improved, and one case in which the complaint was apparently aggravated. Symptomatic relief occurred in 60 per cent of the patients to whom Schwartz and Levin[10] administered Benadryl. In contrast was Levin's[1] observation that the drug was least effective in allergic rhinitis in adults; two of three children were benefited, but only two of 11 adults had any relief.



The procedure in making scratch tests is shown by these illustrations from Essentials of Allergy *by Leo H. Criep, M.D., published by J. B. Lippincott Co. In the picture above, scratches an eighth of an inch long are made with a blunt knife, being careful not to cause bleeding, while below, the testing material is applied.*

Among the most outstanding therapeutic results with Benadryl are those noted in cases of urticaria or hives.[1, 2, 27-31] This is an allergic condition usually associated with sensitivity to certain foods, but a number of other substances may act as causal factors, including injectable materials like sera, plasma, antitoxins, liver, and penicillin, and certain drugs. In one of the early reports on this phase of usefulness, Shaffer, Carrick and Zackheim[32] noted that the favorable therapeutic in 7 of 8 cases of urticaria suggested that Benadryl may prove effective in the palliative relief of urticaria. Todd[33] reported that results with Benadyrl for treating urticarial patients were usually prompt and "quite amazing." Forty-seven of his 52 patients were completely relieved, 4 were partially benefited, and one was relieved of urticarial wheals but not the itching.

Also indicative is the report of Schwartz and Levin[10]. They noted that symptomatic relief occurred in 4 of 5 cases of chronic urticaria, and in all 8 cases of acute urticaria. Following observations on a larger series of cases, Barefoot, Riley and Kuhn[34] stated that Benadryl has a palliative effect on urticaria even when epinephrine and other treatments have not favorably influenced the condition. In most cases the pruriters subsides soon after beginning Benadryl Therapy, although the urticarial wheals may persist.

Benadryl may be useful in other dermatological conditions of allergic origin,[24] Levin,[1] for one, has noted that the drug seems to be of definite value in infantile eczema to control the itching. He also employed the drug in cases of chronic atopic eczema, generalized contact dermatitis, and drug eruptions due to sulfa medication. The drug was also of considerable value in many cases while allergic studies, like skin tests, were being carried out.

Various other allergic conditions have been alleviated or relieved by the administration of Benadryl. So-called "sinus headaches" have responded to a combination of the drug and niacin. Cases of Meniere's disease have been relieved by Benadryl, but better results were obtained when it was used in combination with niacin and potassium nitrate.[26]

In responsive conditions, some beneficial effects may be expected from Benadryl in a few hours. Sometimes the effects are noted within an hour or less.[1, 10] Although Benadryl has a wide margin of safety,[2, 23] almost all clinicians studying the drug have mentioned the occur-

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CHARLES REVSON

He Understands Timing

THE cosmetic business has made great strides forward during the last several years. Sales are now estimated to be over the 800 million dollar mark. Distribution practices have been modified to meet changing conditions. But probably the most dramatic change has been cosmetic's smart realization that it should tie-in its products with fashion. The man who is most often given the credit for promoting fashion as his consumer appeal is young (39), hard-working Charles Revson, president and founder of the Revlon Products Corporation.

The story of Revson's rise to success in the cosmetic business makes some of Horatio Alger's exploits seem small in comparison. The Revlon president was born in Boston thirty-nine years ago. His folks moved to the mill town of Manchester, New Hampshire when Revson was just a small youngster. Charlie began his business career at the age of eight when he started delivering newspapers. After four years as a newsboy he left to take a job selling striped silk shirts in one of Manchester's general stores. It was then 1918—the beginning of America's great silk shirt era.

After graduating from high school Revson decided to try his luck in New York. He came to the big city with intense ambition and a large share of self-confidence. Revson started out on the ground floor . . . he worked as a packer in his cousin's wholesale dress business. By working hard and taking advantage of his natural flair for merchandising young Revson was soon promoted to piece-goods buyer. He left this job when he was offered a selling position by a cosmetic wholesaler. It was then that Dame Fortune gave Revson one of many profitable smiles. After only two weeks of selling cosmetics—mostly nail polish—Charlie Revson became the cosmetic wholesaler's sales manager. A combination of luck and unusual sales aptitude had given Revson just the opportunity he was looking for. After making quite a reputation for his ability to sell nail polish Charlie decided to throw it all up in the air and start out on his own. While some of Revson's friends thought he was making a wrong decision it soon became apparent that the future Revlon chief executive was wise enough to recognize a new trend in nail polishes and he wanted to be in on the ground floor. The revolutionary development at that time was the introduction of a cream nail enamel that had the appeal of softness and style.

With his brother Joseph and Charles Lachman, a chemist, Revson started business in a hole-in-the-wall office for which they paid $25.00 a month rent. They soon produced an opaque nail enamel with an attractive creamy look and a stay-on quality that was reputed to be better than anything on the market at the time. The formula had the further advantage of permitting the introduction of new and different colors which would remain stable on the shelf. It thus became possible for the ladies to select smoky, subtle tones to harmonize with and at the same time complement their dress.

Slick promotion combined with on-the-toes management has made Revlon a leader in its field. Besides the nail enamel Revlon also has a lipstick which was de-

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MEN AND DOLLARS

Drug Industry Sales Managers Need Both

By WILLIAM T. DOYLE

With World War II pushed into the laps of the statesmen, economists and historians, the drug industry's sales managers are launching carefully planned and expanded sales programs. The bells are tolling for men and dollars. It is the responsibility of the sales manager to get both.

It has been estimated that in 1942 there were probably 7,000 detail men contacting physicians in the United States. They averaged about 8 detail calls a day. Most of the companies had their men strive to make at least 100 physician calls a month.

Further studies have shown that the postwar period is certain to see a sharp increase in professional service staffs. Some have estimated that the 1942 detail force of 7,000 will probably be upped to 12,000. Signs indicate that most companies are getting ready to launch new products and intensify their detail efforts. It is timely, then, to stop and consider what is involved in the hiring of men in the drive to increase dollar business.

Job Descriptions

Recently the writer was invited to attend a veterans' sales counciling session. One of the councilors put great stress on the need for the prospective salesman to recognize that when looking for a job he had only a service to sell. He was told how to evaluate his background and experience so that he could better choose the industry and company he might want to work for.

After the meeting was over, I got to talking with a personable, mature young man who seemed to know where he was going and how to get there. He felt that what the speaker had said made sense, but it was a little too one-sided.

"What do you mean?" I said, somewhat startled but quite curious.

"Well, sir," replied the veteran, "I have been interviewed by sales managers of at least one half dozen companies and not one of them has made what I consider a careful job analysis. In a general way, of course, they gave me a sort of surface glimpse of the duties and compensation, but that was hardly enough. Maybe you fellows ought to give the same careful thought to job descriptions as you are giving to helping us get back into the swing of business life."

I have given much thought to those remarks. What he said is probably true. Sales managers would profit considerably in their selection of men if they sat down and wrote out job descriptions. Such an analysis should be built around the answers to the following questions:

(1) What does my medical representative have to be?

(2) What does he have to know?

(3) What does he have to do?

Burton Bigelow, famed management consultant, once said that he was called upon to make a job analysis study of the salesmen activities of a large cosmetic manufacturer who had never prepared a formal duty outline.

Mr. Bigelow analyzed letters to salesmen and sales bulletins for a three month period. He listed on cards every task called for in the communications. He then asked the assistant sales manager to go through the cards and time each task indicating the average number of seconds or minutes it would take to perform the assigned job. When the cards were listed one duty to a line, the list made a sheet three and a half feet long and if the salesman had performed all of the required duties it would have been necessary for him to remain in each drug store sixteen and a half hours.

As suggested by Mr. Bigelow, such management cannot be called very scientific. He has cautioned sales managers many times to prepare written job descriptions and time them. He feels in this way it will be possible to keep a check on whether or not the demands being made of the men are ridiculous or unreasonable.

Selection of Sales Personnel

There is no hard and fast rule or formula for selecting representatives for pharmaceutical companies, but once a job description has been set up it should help to simplify the matter of selecting men.

Sources—Colleges of pharmacy, drug stores, hospitals, surgical supply houses and other medical representatives all serve as sources for locating and selecting new men. The fact should not be overlooked, however, that some very successful pharmaceutical executives have not had any medical or scientific background. Some have had premedical training which is usually quite satisfactory. In the final analysis the decision to hire a new man must rest on many factors. Certainly be-

WIDE WORLD

cause an applicant does not have a scientific background should not rule him out.

Personal History and Screening—It is important that an application form be designed with the purpose in mind of getting as much pertinent information of man's background as possible. Some companies have never bothered to revise their application blanks in the light of new personnel developments. This should be done by those who have overlooked it.

To eliminate those who are obviously unsuited for a job as a medical representative, a screening procedure should be set up to cut down expensive interview time. Obvious physical infirmities which might interfere with the rather vigorous activities of a medical representative would of course preclude the hiring of such a man. There are other inadequacies, too, which might appear following a careful analysis of man to job.

Interviews—A personal interview based upon a tested pattern should reveal significant leanings or attitudes.

It is extremely desirable to provide responsible interviewers with a rating chart which has been carefully prepared according to latest personnel standards. By asking a series of key questions, properly rated information can be gathered regarding whether or not the applicant falls into a category which usually produces successful medical representatives.

Tests—There has been much to-do in sales management literature about the use of aptitude tests for selecting men. It is well to caution at this time that aptitude testing, like penicillin, is not a cure-all. Even with penicillin the wise physician must practice intelligent, logical medicine; so it is with aptitude tests. The sales manager who looks upon aptitude tests as a cure-all for his selection-of-men headache is doomed to failure. On the other hand, aptitude testing together with other bits of information compiled in an orderly and scientific manner provide the necessary tools for minimizing selection mistakes.

Multiple Interviews—Those who have had considerable experience in selecting men have come to the conclusion that it is most important to see a man more than once. Meeting an applicant at different times under different circumstances is very worthwhile if a true picture is to be obtained

Some sales managers are of the opinion that in the second or third interview the applicant's wife should be brought onto the scene. If it is necessary for the prospective representative to be away from home frequently the wife should know about it. Some women are quite opposed to their husbands' being absent from home. Sometimes it is a matter of loneliness, and other times there have been instances indicating the husband could not be trusted away from his home. In any event, the progress the man may make is very definitely tied up with his wife. She can be a help or a hindrance.

References—Personal and Credit—It has been the custom in the past to ask an applicant for the names of three persons, not relatives, who are in a position to give a fairly objective word picture of the man and his qualifications. Unfortunately, when a man is asked to write his opinion of another he tends to gloss over the weak points. Therefore, personal interviews with those given as references are, if possible, much more desirable.

There are reputable credit organizations who are set up to give careful reports on the applicant's ability to meet his financial obligations. The kind of data sup-

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EMULSION TECHNOLOGY

By I. R. HOLLENBERG, M.S.*

THE applications of emulsion technique are constantly growing in scope and variety. More and more industrial products are appearing in the form of emulsions. Nor are these products limited to any one industry. We are all familiar with the major role of emulsions in the toilet goods industry; but, many other applications are appearing daily. In the food, drug, paint, and agricultural industries, to name but a few, emulsions are gaining in popularity. It is difficult to place one's finger on any single reason for this trend. Undoubtedly, there are many factors which have contributed to the phenomenal increase in the number of emulsified materials which previously were marketed in another form. During the war, of course, the shortage of solvents often made it necessary to emulsify a product instead of dissolving it; and by this means a considerable lowering of the cost of the product was also achieved. Often the active ingredient of a preparation is found to have greater efficiency when applied in the form of an emulsion. Emulsions have been found to have more desirable aesthetic properties and consequently greater sales appeal than other media. Another factor to be considered is the fact that with the development of new and more efficient emulsifiers, combined with other advances in emulsion technology, it is now possible to formulate emulsions with materials and under conditions that hitherto could not lend themselves readily to the process of emulsification.

With the constant broadening of the field, the need for an understanding of the principles involved in forming emulsions and keeping them stable and the practical application of these principles is manifest. There is a staggering volume of literature going back many years concerning the theoretical aspects of emulsions and within recent years much has been printed about the practical side of the problem. However, the emulsion chemist soon finds that each problem that presents itself to him has its own peculiar difficulties and that, in most instances, there are no cut and dried solutions to be found by referring to any handbook or similar source. On the other hand, if he refers to the enormous volume of literature on the subject, he is soon bogged down in a welter of contradictory concepts which are of but little use to him. However, certain basic concepts are of help in the formulating of emulsions and a working knowledge of these is essential. It is necessary, therefore, to have an understanding of the theoretical principles involved; at least, of those principles which through experience have shown to have a practical application. The next step is to apply these principles to the every day job of producing stable emulsions. Even when we have arrived at the point where we can apply these principles to the particular problem, we soon find that they are not universally applicable. As Clayton[6] points out, results may vary with the type of materials emulsified. For example, if a stable emulsion containing a given amount of a particular vegetable oil is successfully formulated, the chances are that this same formulation would not work if a mineral oil were substituted for the vegetable oil. In fact, too often, even the slightest change in the proportions of the ingredients will cause instability and necessitate the revamping of the entire formula. In this paper we will limit ourselves to touching on some of the emulsion theories which have shown themselves to be of considerable practical value, even though they may be somewhat conflicting and would seem to be impossible to reconcile.

Surface Tension and Particle Size

An emulsion may be described as a dispersion of a minute droplet of a liquid in another liquid. The liquids that we most commonly deal with are oil and water. Likewise, since the majority of emulsions that the technician is concerned with have to be by nature stable, a third factor has to be considered, namely, the emulsifying agent. If the oil is dispersed in water, then we have what is commonly referred to as an oil-in-water emulsion. Conversely, if the water is dispersed in an oil medium, a water-in-oil emulsion is formed. The bulk of the literature has to deal with emulsions of the former type and for the purpose of many of these studies, soap has been used as the classic example of an emulsifier. We have all observed that if a number of drops of a liquid are spattered on a non-absorbent surface such as a glass plate they will tend to coalesce and form larger droplets and ultimately form a pool. This is due to the surface tension of the liquid, which acts to contract its surface into as small an area as possible. Naturally, a single large droplet of a given liquid has a much smaller surface area than if the same large droplet were broken up into smaller droplets. Therefore, a surface active agent, which would tend to lower the surface tension and inhibit the tendency of the fine droplets to coalesce and so maintain their small size, would tend to act as a

*Van Dyk & Company, Inc.

stabilizing force in the emulsion. While today most writers agree that the influence of the surface tension is of great importance, many of the earlier workers in the field were of the opinion that this factor alone was the most important consideration in the mechanism of emulsification. The influence of surface tension will be discussed at greater length when the subject of particle size is dealt with, since the two subjects are inseparable. Surface tension is, undoubtedly, one of the prime factors influencing particle size; but, since other equally important forces are involved, the effect of particle size will be handled as a separate topic later on. Plateau[18] and Quincke[19] stated that the surface tension lowering property of an emulsifier is its most important function and that the measure of its efficiency is in direct proportion to its surface tension lowering activity. Donnan[8] devised the pipette which bears his name for use in measuring interfacial tension by bubbling droplets of vegetable and mineral oils containing measured amounts of various fatty acids into a dilute NaOH solution.

Oriented Wedge Theory

Bancroft[1] pointed out that the nature of the emulsifier determined the properties and characteristics of the emulsion. He then postulated the theory of the emulsifying agent being adsorbed at the interface between the two phases and separating them by a continuous film.[2]

Other factors were investigated and it soon became apparent that there were many forces and conditions involved in the emulsification process. Much investigation centered about the film of emulsifying agent which was shown to be formed about the droplets of liquid in the dispersed phase. The nature and properties of this film were investigated, as well as their effects on the emulsion system.

Langmuir[16, 17] found that in emulsions where soap was the emulsifying agent the film which formed about the dispersed droplets had the thickness of the order of one molecule. Harkins, Davis and Clarke[11] did similar work at approximately the same time and the theory of the mono-molecular film began to take place; and, with the work of Finkle, Draper and Hildebrand[19] the theory of the oriented wedge emerged. The latter carried the work further and applied the theory to both water-in-oil as well as oil-in-water emulsions, using sodium, potassium, and cesium soaps in the study of the latter

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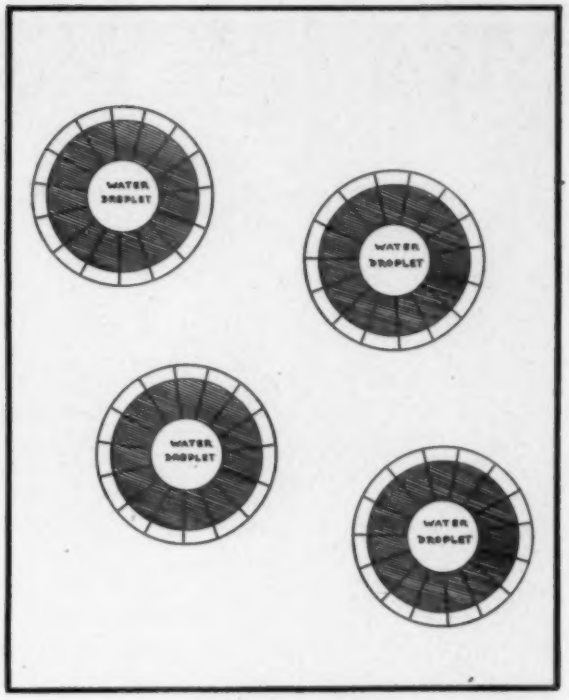
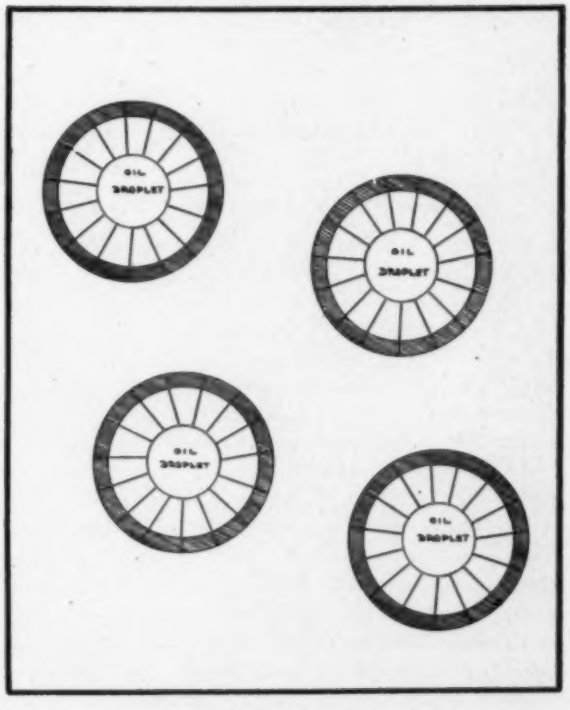


OIL PHASE (Figure 1)



WATER PHASE (Figure 2)

The inner circles in each diagram represent a droplet of the dispersed phase. The outer circles represent the film formed by the emulsifying agent. The shaded segments indicate the polar active group while the unshaded portions represent the organic group.

Trends in Modern Medicinals

By MADELINE O. HOLLAND, D.Sc.*

This article, which is reprinted from the American Journal of Pharmacy, is an outstanding review of most of the newer therapeutic aids which have been released during the past few years. It gives to the reader the present status of these important advances made in medicine under the intense research and development of the war years.

A GREAT many stirring events have taken place in the world in the past two years. Both the European and Pacific Wars have ended and the world slowly and with great difficulty is attempting a readjustment to a peacetime status and philosophy.

Pharmacists and physicians now find their pharmacologic armamentarium greatly expanded with many new drugs of a highly specific nature and now available for civilian use. Many of these were developed under the intense program of war-time research. It is the purpose of this article to briefly review some of these new medicinals giving such pertinent data as seem indicated.

Influenza Virus Vaccine Types A and B

One of the many drugs to be developed as a result of research during the war period was the influenza virus vaccine. This vaccine is manufactured by inoculation of the virus into the allantoic cavity of chick embryos in ten-day old eggs, followed by incubation for forty-eight hours. The allantoic fluid is collected, centrifuged to separate the virus, dissolved and treated with formaldehyde. It is then tested for sterility and safety. The vaccine is employed for immunization against influenza particularly during epidemics.

Influenza is characterized clinically by a pathogenic effect upon the epithelium of the respiratory passages. The virus A type has an abrupt onset with fever and severe constitutional symptoms lasting three or four days. Its incubation period is from one to two days. Virus B Influenza has a more gradual onset with less intense symptoms and a shorter duration of fever. The incubation period for this type is less than twenty-four hours. Influenza is spread readily from man to man and its care is symptomatic, supportive or preventive. The extreme debility caused by this disease is out of all proportion to the short duration of the acute stage of the disease. The economic waste of man hours is great.

The influenza virus vaccine was first tested in November and December of 1943 when a widespread epidemic occurred. The subjects selected included 12,500 A. S. T. P. men. Of these 6,211 remained unvaccinated and 6,263 were vaccinated. In the former the attack rate was 7.11 per cent and in the latter 2.22 per cent. The dosage of the vaccine is 1 cc. administered subcutaneously. The immunization lasts for a few months. Therefore, if it is desired for the entire winter, the vaccine must be administered every three months. The immunization may not completely protect every individual but it does reduce the likelihood of disease and the severity of the infection if contracted. There are no serious reactions to the vaccine itself although it is necessary to beware of possible hypersensitivity of the patient to the antigen or to egg protein. The patient may also have been previously sensitized by injections of vaccines prepared from chick embryos. Before administration the vaccine should be well shaken. It should be stored at a temperature of 36° to 50° F. since freezing destroys its potency. At the present time Influenza Virus Vaccine Types A and B is marketed by Eli Lilly, Parke-Davis and Co., Pitman-Moore and E. R. Squibb and Sons.

Digitoxin

The next drug to be considered is one which involves digitalis therapy which has been under scrutiny for so many years. Gold has stated that there are four significant factors in selecting a digitalis preparation. They are as follows: (1) potency; (2) absorption; (3) speed of action; and (4) speed of elimination. Digitalis itself does not possess all of these advantages. The assay of digitalis is dependent upon the intravenous injection of a preparation into cats. Results with this method are not altogether reliable in predicting the therapeutic effectiveness since digitalis varies in its absorbability when given orally. The ideal product would be one that is so well absorbed that oral and injected doses are the same. Furthermore, if it is rapidly absorbed from the gastrointestinal tract there is considerably less nausea and vomiting. Digitoxin offers these advantages as well as being more stable. It is standardized by weight and checked by assay on humans. Thus it obviates the problems of translating potency in animals to dosage in man.

Digitaline Nativelle is a similar product but is not

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The jungles of the South Pacific are infested with malaria, strange tropical fevers and skin diseases. This picture called "Jungle—Ally of the Enemy" was painted by Franklin Boggs for the Abbott Collection of Paintings of Army Medicine.

identical. The original digitoxin was described by Schmiedeberg in 1875. The first product of this nature to be made available was Purodigin and was presented by Wyeth, Inc. Other products now available are Digitoxin as marketed by Abbott and Squibb under that name, Cardigin by National Drug and Crystodigin by Eli Lilly. Digitoxin is a thousand times as potent as digitalis, therefore, 1 mgm. is the equivalent of 1 Gm. Sufficient digitoxin (1.2 mgm.) may be given at one time to digitalize the patient. An equivalent amount of digitalis to digitalize the patient at one time is not only unsafe but would also cause nausea. The maintenance dose of digitoxin is 0.2 mgm. daily.

Curare

Many of our present-day drugs have a romantic history. When we really delve into the background of these drugs we find that they are not so far removed from those that were used in ancient days. The Indians in South America used to employ an arrow poison which they prepared from the bark and stems of a plant. An infusion was first made and then concentrated to a syrup into which they dipped the tips of their arrows. In 1595 Sir Walter Raleigh brought some of this poison to England for investigational purposes but due to the limited supply no great discoveries were made.

In more recent years it was discovered that this tube curare contained an active principle known as d-tubo-curarine chloride. This substance causes an interruption of the nerve impulse at the neuromuscular junction. The motor nerve impulse travels to the muscle where the contraction is mediated by acetylcholine. The curare principle meutralizes the acetylcholine reaction probably by the prevention of muscle acceptance of it. Thus the transmission of the impulses is intercepted. The degree of interruption depends upon the amount and the reaction is reversible in that normal activity is resumed as soon as the curare disappears.

In large doses curare causes paralysis and in smaller doses relaxation. It acts as an antidote to prostigmine. The uses of this drug are four, as follows: (1) as an adjunct to soften the convulsions of metrazol therapy; (2) to obtain complete muscular relaxation particularly in abdominal surgery and thus reduce the quantity of anesthetic required; (3) as a diagnostic agent in myasthenia gravis in that it worsens the condition; and (4) in the relief of spastic and athetoid states. It has been stated that curare has proved the greatest boon to schizophrenics who otherwise might not be able to withstand the severity of shock therapy, curare acting to soften the convulsions. It is available under the trade name of Intocostrin and is manufactured by Squibb. Each cc. of the solution contains 20 mgm. of the drug.

Prostigmine

Prostigmine is not exactly a new drug but it is mentioned here because some new uses have been found for it. The action of prostigmine is similar to that of physostigmine (eserine) but is less toxic. It was first synthetically produced by Stedman in 1931 and has been used for the same purposes as eserine and related drugs. These uses include post-operative paresis of the bladder; relief of intestinal distention; and in the relief of intra-ocular pressure in glaucoma.

There are several new uses which have been established for prostigmine in therapy. As previously stated under curare, it acts directly opposite to curare and therefore the two are antidotes for each other. Since curare is used as a diagnostic agent for myasthenia gravis by worsening the condition it is logical to assume therefore that prostigmine should be of value in the treatment of this condition. It is administered either orally or parenterally. Employed as a therapeutic test for pregnancy, in the pregnant woman no effect is noticed but if there is no such condition it will bring on menstruation in a high percentage of cases. In infantile paralysis it reestablishes muscular coordination and makes muscle reeducation more easy by increasing the muscle response to nerve stimulation.

Stimulation of the parasympathetic nerves causes a release of acetylcholine which in turn affects the muscles. Acetylcholine is rapidly hydrolyzed by the enzyme cholinesterase but this enzyme is inhibited by such drugs as prostigmine and eserine. Thus the stimulus to the muscle is both intensified and prolonged by the inactivation of the cholinesterase. Prostigmine, manufactured by Hoffman-La Roche, is available as the methyl sulfate for parenteral use and as the bromide in the form of tablets for oral use.

Dental Caries

Surveys have revealed that persons drinking water with a high fluoride content develop mottled tooth enamel. However, they have found that such persons with this mottled enamel are less likely to have dental caries. Studies have been made by adding fluorides to the water of one town and using as a control a neighboring and similar town where no fluorides were added to the water supply. Noticeable results were obtained in these studies. However, it is difficult to control the human consumption of water in order that the individual may receive sufficient fluoride. Therefore it was felt that a dosage form was needed. Studies relative to this were conducted on children from eight to sixteen years of age. One group received no fluorides. The increase in the incidence of dental caries amounted to 40-65 per cent. In those children receiving fluorine (one p.p.m.) or calcium fluoride (3 mgm.) a 27 per cent increase was noted. In a third group given the fluoride plus vitamins C and D an increase of only 24 per cent was noted. Thus it can be seen that fluoride has some effect on the incidence of dental caries. A significant reduction is also noted when vitamins C and D are added.

The theory advanced for these observations is that the fluoride forms fluorapatite with the enamel of the teeth. This fluorapatite is harder and more resistant than calcium phosphate. There are three products now available for use in prevention of dental caries. They

are as follows: Enziflur, marketed by Ayerst, McKenna and Harrison in the form of tablets which contain per tablet, calcium fluoride, 3 mgm., vitamin C, 30 mgm. and vitamin D, 400 units; Fluoros D, marketed by National Drug Company containing seven and one-half grains of bone meal (0.1 per cent fluoride), vitamin D, 400 units, calcium and phosphorus; Ce-De-Flor, marketed by Haack Brothers containing calcium fluoride, 3 mgm., vitamin C, 30 mgm. and vitamin D, 1000 units.

Sulfathalidine

The sulfonic drugs have more or less taken second place in the attention of the world since the advent of the microbiotics. However, a new sulfonamide drug introduced some time ago for veterinary use has now found application in human illnesses. Phthalylsulfathiazole is a relatively nontoxic sulfonamide for the treatment of colon infections. It acts as an intestinal bacteriostatic agent. It can be maintained in high concentration in the intestinal tract where its bacteriostatic activity markedly alters the bacterial flora. Only 5 per cent is absorbed from the bowel. It is rapidly excreted by the kidneys. The free form is not excreted in very large quantities and the conjugated form forms soluble salts even at a pH of 5.6. No crystalluria is observed. Phthalylsulfathiazole is a white crystalline powder practically insoluble in water and weak acid. It is dissolved by an excess of an aqueous solution of sodium bicarbonate or sodium carbonate with a release of carbon dioxide. Employed in the treatment of ulcerative colitis, regional ileitis, giardiasis, paratyphoid infections, and to supplement the therapy of amebiasis, it is also of value in intestinal surgery. Sharp and Dohme supply this drug under the brand name of Sulfathalidine, in 0.5 Gm. tablets.

Combisul

Although there have been very few new sulfonamide drugs brought to the fore recently, a new principle has been evolved. This principle involves the use of a combination of two sulfonamides wherein it has been found that each acts as if the other were absent except in their effect on bacteria. It has been noted that a saturated solution of one will dissolve as much of the other as will pure water. Combisul T D contains 0.25 Gm. each of sulfathiazole and sulfadiazine. It has been found that such a combination reduces considerably renal damage and crystalluria. With sulfathiazole alone crystalluria occurs in 70 per cent of the cases and with sulfadiazine in 29 per cent of the cases. When the two drugs are combined it occurs in only 7 per cent. Renal toxicity occurs in 3 to 5 per cent of the cases when either drug is used alone but in the combination it is reduced to zero. Drug fever occurs with sulfathiazole in 10 per cent of the cases and with sulfadiazine in 2.4 per cent. In the combined form drug fever is observed in only 1.4 per cent. Combisul D M contains sulfadiazine and sulfamerazine, of each 0.25 Gm. The T D is used successfully in pneumonia, respiratory and other related infections. The D M is employed in meningitis. The dosage given is the same as with a single sulfonamide. The initial dosage is 4 Gm. followed by 1 Gm. every four hours. Adjuvant measures of alkalization and forcing of fluids may be omitted but patients should not be deprived of this added protection if needed. All other precautions with sulfonamide drugs should be observed.

Folic Acid

The complex nature of the B vitamins has been known for some time and several of the factors have been isolated. However, in administering these factors to chicks it was noted that a severe anemia developed when the individual factors were administered rather than the entire food material. This factor was found to be present in liver, yeast and alfalfa. It was subsequently called vitamin Bc or factor U. During this period certain workers found that another factor was necessary for the growth of the lactic acid organism, *Lacto-bacillus casei*. This was called the *L. casei* factor. It, too, was found to have some relation to this anemia factor.

An anemia in monkeys was found to occur when a certain factor was absent. This was called vitamin or factor M. Finally, the vitamins Bc and M were determined to be the same factor as found in green leaves in minute amounts. It was therefore named folic acid. Since that time it has been synthesized and has been found equal to liver extract in macrocytic anemias such as pernicious anemia and those occurring in sprue, pellagra, and pregnancy. Macrocytic anemias are characterized by too few and abnormally large red cells and are usually caused by nutritional deficiencies. Folic acid has been found to be orally effective in such anemias. It is particularly valuable in patients who are sensitive or who have developed a sensitivity to liver extract.

The outstanding observation relative to this compound is the fact that a synthetic nutritional factor has been found to stimulate red cell formation. Folic acid has been found to be a specific in the problem of large cell anemias and by finding a single synthetic substance it has been observed that complex physiological reactions are not necessary. Folic acid is now available in 5 mgm. tablets under the brand name of Folvite and is marketed by Lederle Laboratories.

Antimalarials

It is almost impossible to believe that 25 per cent of the inhabitants of the globe have malaria. A great deal of work has been done on antimalarials and an extensive research program was carried out during the war years as prompted by the exigencies of the times. The ideal antimalarial would be one that prevents relapses. In recent months there has been considerable publicity on a new antimalarial first called SN7618 and now given the name chloroquine by the Council on Pharmacy and Chemistry of the American Medical Association.

(*Continued on page 426*)

Putting more BUY APPEAL in the package . . .

A strong selling package with more "come on" will play an increasingly important part in selling campaigns from now on . . . Many manufacturers have already sensed this, and are taking steps toward package improvement.

An improvement in the design of your package, for instance, can give it a more distinctive, eye-catching appearance. A different type of package may show up your goods to greater advantage, or it may give your product greater protection against deterioration. New methods are continually being devised to afford greater convenience to the user (easy-opening devices, for example).

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Packaging and Selling

Lipstick Market

Today the care and scientific skill that goes into the manufacture of a lipstick is a far cry from the hit or miss mixing bowls of the perfumers' shops in bygone years. The acceptance of this decorative cosmetic in the last few decades from a luxury item for a privileged few to its use by the vast majority of women has made its production big business. Last year the amount spent in this country for lipstick alone was almost 28 million dollars, more than twice as much as was sold in 1940.

The manufacturer of lipstick has to take into consideration physical appearance and consistency as well as possible changes that may take place in the stick while standing on the shelf. Since lipstick is applied to one of the most sensitive areas of the body, the materials have to be carefully evaluated by any manufacturer. The research that goes into a lipstick before it is put on the market is as thorough as that to which any medicine or drug is subjected.

Most women are not interested in the technical difficulties encountered in the production of lipstick. They either choose a stick for its shade, smoothness or ease of application. Generally the younger woman prefers an oily type containing a bright, flashy color. Older women want a product which enhances only slightly the natural color of the lips. True red is the most popular shade, it was found in the tabulation of several nation-wide surveys, with blue red second as popular choice. As was brought out in one survey, women want a lipstick to go with their skin coloring, rather than one that has some accessory value to their clothes.

This year, much like the period preceding the war there have been a number of new lipstick colors on the market. The nation-wide campaigns paced by Revlon, Chen Yu, Hudnut and others have placed before the public a multiplicity of shades from which to choose. The unrestricted warfare raging now among the various lipstick manufacturers has brought forth one after another of variously named shades, not just one from each firm, but in some instances numerous colors have been flung into the fray to capture the public's fancy.

The number of brands on the market today is well upward of 160 but of these only a dozen are of real commercial importance. Numerous surveys, recently conducted in different sections of the country, among various occupation and age groups have put Revlon as one of the most popular brands. A good indication of Revlon's current popularity is illustrated by the survey made by Dell Modern Magazines. Some 15 per cent of those questioned, listed Revlon as their favorite, Max Factor was second being chosen by more than 11 per cent, Tangee polled 9 per cent, Avon 8 per cent, Coty 7 per cent and Ponds a little more than 4 per cent. These six brands in this particu'ar survey did almost 52 per cent of the total business.

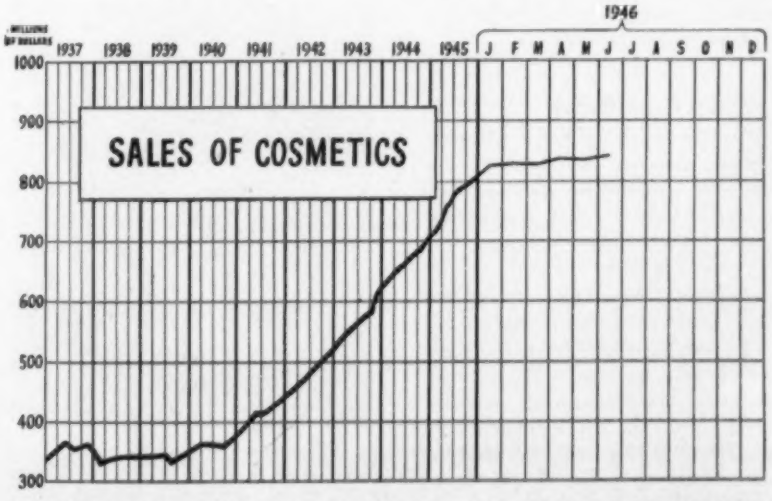
Price plays a comparatively unimportant part in the choosing of a lipstick, and with the increased purchasing power at the command of women there has been quite a bit of price switching to the higher priced lipsticks.

The St. Louis, Globe-Democrat reported that about 21 per cent of those questioned in their survey reported that they have changed to brands other than those they were using several years ago. It is noteworthy that of those who shifted the younger age groups made the biggest switch, perhaps this was because they were comparatively new as customers and influenced by the heavy advertising in the national magazines.

Revlon was the chief gainer in this change, with Chen Yu second, both no doubt benefiting from the tremendous advertising campaigns they have been conducting. Tangee long a best seller in the ten cent market has given some ground to these higher priced lipsticks but, along with Ponds, still remains among the top volume sellers of ten cent lipsticks. Between the two brands, they sell almost 85 per cent of the ten cent units.

Lipstick has reached such an acceptance among women today that more than 95 per cent use it. Though naturally its use leads with the younger age groups, there has been a gain in its use among older women, 63 per cent used lipstick in 1945 as against 58 per cent in 1943.

The heaviest users of lipstick fall in the 17 to 25 age group, some 98 per cent of these said they used it. Office and store workers are the largest occupational group using lipstick, industrial workers next, homemakers and students came last.



Retail sales of cosmetics for the twelve months ended with June 1946 totaled $840,253,000. This compares with $835,405,000 for the twelve months ended with May 1946 and with $772,775,000 for the twelve months ended with June 1945.

Income does not affect the picture very much but according to the facts revealed by the surveys occupation plays a rather important part. It is the young office or store worker along with the student who finds it necessary to look her best at all times and consequently will be the ones who will spend the most to experiment with a new shade of lipstick.

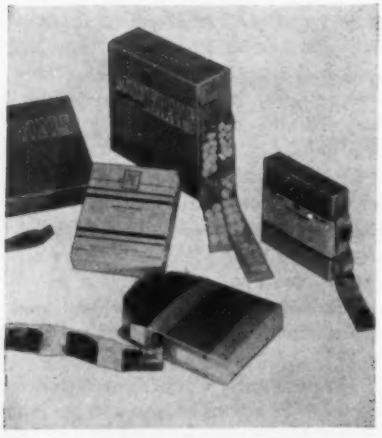
Whether the woman lives in a metropolitan center or in small towns the percentage using lipstick is about the same. In several cities of over 100,000, 95 per cent said they used lipstick. In numerous towns of population under 2,500 those using lipstick amounted to 95.3 per cent. In outlying rural areas lipstick is used by about 77 per cent.

Department stores since they are primarily a big city enterprise, lead in dollar volume—do an average of 45 per cent of the lipstick business.

Drug stores tend to be dominant in cosmetic sales in smaller communities and average some 30 per cent of the lipstick sales.

Variety stores do the largest volume in unit sales, tend in dollars to do about 10 per cent.

In the past the older a woman became, the less likely she was to apply lipstick; formerly this might even have applied to the younger women. Such is not the case nowadays, lipstick is used more naturally and its use and growth will continue as the girls now in high school and colleges and in the business world carry the habit through life.



The Steven's Unit Package features a continuous tape packed automatically by machine to dispense tablets in capsules in ones, twos, threes and so on up to twelve in a tuck-end carton.

Steven's Unit Package

The William Steven Co., Los Angeles, announces the Steven's Unit Package, designed to pack all types of tablets, perles, capsules, and free-flowing powders in individual packets of sanitary cellophane tape. The company emphasizes its convenience features, its sales appeal, display value, and economy. According to the release, "the particular feature of the Steven's Unit Packing Plan which gives it such universal appeal among packers of pharmaceutical products is its flexibility and adaptability to all kinds of products of many sizes and shapes. In continuous tape, the machine will pack tablets or capsules in ones, twos, threes, and so on up to twelve to a packet. It will, if required, pack one tablet and one capsule, or one and two, or two and three, etc. Even the content of successive packets may vary and alternate. Virtually any combination of tablets or capsules representing a specific or daily recommended dosage can be packaged in each sealed pocket pack, eliminating the need for the user to carry a full package or loose tablets or capsules. Similarly crystalline or granular free-flowing powders such as hair rinses, bubble baths, and a variety of dry food products may be sealed into each unit.

If the product to be packaged requires unusual protection against moisture, the tape may be made of Pliofilm or a new moisture-proof, heat-sealing foil-film lamination. The machine which performs these miracles, forms the tape from the strip material, loads, seals and perforates each packet, measures the prescribed length of tape, rolls it and drops it out onto a table where it is immediately inserted into a previously perpared tuck-end carton.

Unfamiliar Razor Blades

Attesting to the popularity American cigarettes gained in Europe during the war, some continental manufacturers are marketing razor blades under brand names of leading American cigarettes, J. P. Spang, Jr., president of the Gillette Safety Razor Co., reported on returning from a business trip to Europe.

The new blades are offered in packages of the same color and general design as the original cigarette packages. Though quality is poor, manufacturers appeal to the war-time memories of customers, using such names as Camel, Chesterfield and Lucky Strike.

Mr. Spang also reported that many firms selling in Europe were resorting to "compensation trading," the post-war name for age-old barter, to overcome monetary difficulties in reestablishing their markets.

Gillette's Swiss subsidiary, he explained, swapped its blades for tomatoes, asparagus and strawberries from northern Italy. Gillette's Italian representative was lining up other seasonal crops in the Po Valley so that he could barter the year around. Exchanges of wood from Austria and glass from Czechoslovakia are moving blades from Switzerland into those countries, and similar arrangements are pending in several other countries.

Hair Survey

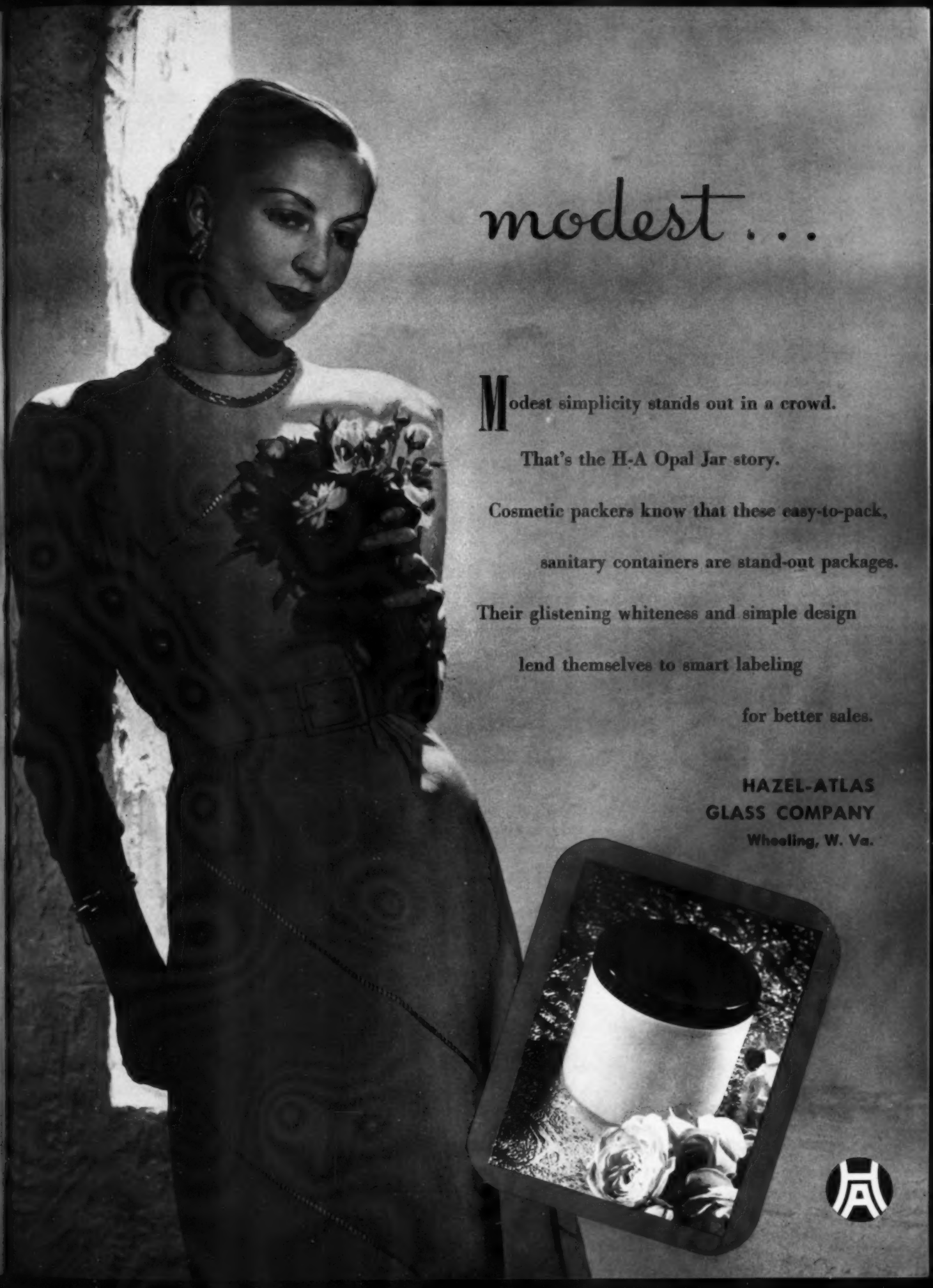
The current trend in hair grooming, among American women, is toward home care, the latest Fawcett Beauty Reader Forum reveals.

The number of women who shampoo their hair at home has jumped from 48 per cent last year to more than 53 per cent in 1946; 46 per cent do their own setting as compared to 41 per cent who did so last year and 30 per cent used home permanents this year, an increase of 7 per cent over 1945 usage.

Liquid shampoo is still preferred by over three-fourths of the women questioned, the survey shows a marked increase from 5 per cent last year to more than 12 per cent this year, in the use of cream shampoos, also a slump of 6 per cent in the use of cake soap.

Although brilliantine leads in hair

Some Italian razor blade manufacturers have copied American cigarette names, colors, and packages for their products. Printing on the blades and packages advertises a "Special American Type System. They are not frightened of other competitors."


modest . . .
Modest simplicity stands out in a crowd.
That's the H-A Opal Jar story.
Cosmetic packers know that these easy-to-pack,
sanitary containers are stand-out packages.
Their glistening whiteness and simple design
lend themselves to smart labeling
for better sales.
HAZEL-ATLAS
GLASS COMPANY
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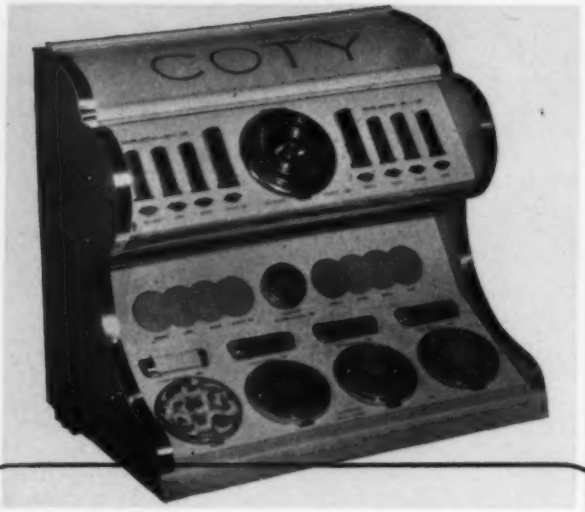

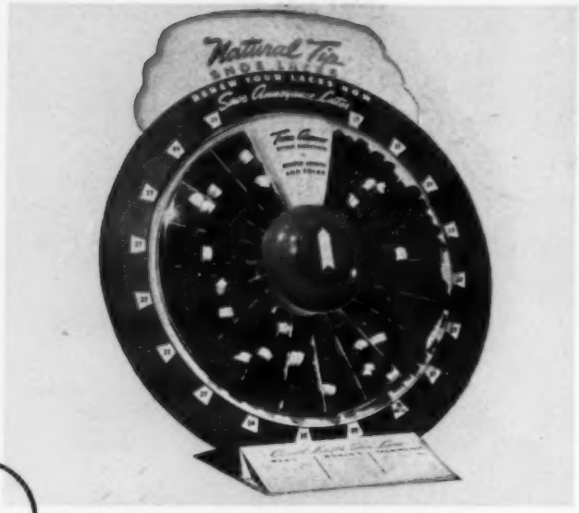

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Open secret of many merchandising successes has been the ability to get the product *plenty of display* . . . continuous, up front, counter display . . . where store traffic flows, where the money changes hands, where the buying impulse is at its peak.

It's been proved, too, that nothing excels Vuepak, Monsanto's beautiful, transparent, rigid packaging material . . . for displays that truly *display*. Top designers, leading manufacturers, and merchandisers have found that Vuepak lends itself beautifully to their creative ideas, gets enthusiastic retailer co-operation, sells their goods while it protects them. Also, Vuepak cases are economical at the same time as they're luxurious; they're easy and safe to pack and transport.

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1. **What is Vuepak?**
   Vuepak is a transparent, tough, rigid, beautiful Monsanto cellulose acetate.
2. **In what forms is Vuepak available?**
   In sheets up to 30" wide, and in continuous rolls 30" wide up to 1000 ft. long, in thicknesses up to .015". Available in .020" thickness in rolls with unit finish or in 20" x 50" press polished sheets.
3. **In what thicknesses is it ordinarily available?**
   In six standard gauges 0.005" to 0.020".
4. **Does sunlight affect it?**
   No.
5. **Is it affected by heat?**
   Not under ordinary temperatures. It begins to soften after 200° F. Underwriters' Laboratories classification, "slow burning."
6. **How can it be fabricated?**
   It can be drawn, shaped, formed or folded into almost any shape with inexpensive dies. It can be embossed, stapled, printed, cemented, or combined with other materials.

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TRADE MARK

The Cosmetic Trend

While growing department store sales can not be regarded as a completely reliab e indicator of the regional sales trend for cosmetics, the regularity of their proportional standing within the department store sales structure, averaging 3.3% of total sales during the last three years, makes it, nevertheless, reasonably sure that sales increases reported by the department stores imply similar proportional increases of the sales volume of cosmetics, wherever they occur.

Applying this rule to individual regions, and using the figures supplied by the Federal Reserve Board for the purpose of the following estimates, toilet goods demand should have grown most rapidly during the current year over last in the New York and Minneapolis region, with Atlanta making a good third. Next in line might be Dallas, followed closely by Cleveland, Chicago, St. Louis and San Francisco. The markets recording the lower advances are Philadelphia, Kansas City, and Boston in the stated order, while Richmond takes the end.

However, the lowest reported sales advance for any Reserve District is 21 per cent over last year while the highest, those of New York and Minneapolis, reach 34 per cent; making the unusually high average of 28 per cent for all the nation.

More recent figures indicate high activity in the following city markets: Birmingham, Chicago, Cincinnati, Dallas, Denver, Houston, the Los Angeles area and West side, Louisville, Miami, Memphis, Milwaukee, Newark, New Orleans, New York City, the Philadelphia area, Pittsburgh, Salt Lake City, San Antonio, St. Joseph, Syracuse.

Analyzing the cosmetic marketing situation more closely there is evidence of a wide spread tendency of the cosmetic markets to level the rate of consumption upon a higher scale. Low spots that were left over from last year, because of local conditions, are picking up more rapidly than others. This explains the faster advance of some regions and makes them good markets to enter at this time. Small and medium sized city markets and suburbs deserve special attention in this respect. Many new shops are springing up and part of the rapid increase in wholesale-volume consists of the purchases of these new enterprises for stock purposes.

New York, Philadelphia, Los Angeles have apparently responded more immediately to the stimulants of new customer groups, as the teenagers, men, etc., etc. The tourist sections of the South are beginning to feel the effect of the growing number of summer tourists attracted by the heavy advertising of resort hotels and Chambers of Commerce. Miami sales rose 30 per cent, 34 per cent and 47 per cent during three succeeding July weeks. Washington, D. C., at the other hand, after being one of the most active spots for most of the war came down to plus 2 per cent, plus 14 per cent, plus 13 per cent during the same period.

The conclusion is that there is plenty of interest into cosmetics left in support of a growing market, but that sales will come easiest in territories which have to make up for lost time and in groups of articles where a new clientele can be developed. The prediction that summer advances would come to the aid of cosmetic articles that failed to grow as expected during the earlier part of the year appears to be well supported by current experience.

preparations being preferred by 44 per cent, this product was used by 52 per cent in 1945. The use of hair dressings, often products containing lanolin, is on the upswing with a jump from 22 per cent in 1945 to 29 per cent this year.

According to the Fawcett survey, Drene leads in use of liquid shampoos, some 26 per cent said they used it, but there was a drop in its preference as against the 32 per cent who used in it 1945. Halo was second in preference with 19 per cent an increase of more than 5 per cent over last year. Fitch, third with 10 per cent and Kreml next with 7 per cent tying with Castile Soap.

In cream shampoos, Kay Daumit was the more popular being used by 51 per cent. Rayve next with 24 per cent. Vita Fluff a poor third with 4 per cent.

Cold waves show a steady increase in popularity. Last year 17 per cent had this type of permanent, while the 1946 figure is more than 23 per cent. Most women paid more for permanent waves this year than they have before, with 68 per cent paying over $7.00 as compared with the 58 per cent who paid a like amount last year.

Men's Toiletries Survey

Toiletries for men is one new industry that has gotten a terrific boost from the war. There were men's toiletries on the market before the war but, like the cigarette and the wrist watch that gained a wide acceptance following World War I, the use of toiletries for men has caught on and developed into a real industry.

There are now on the market upwards of 150 brands of various kinds of men's toiletries, including such items as colognes, after shave lotion, deodorants, shaving soaps, etc. In the list compiled by Esquire market research department, the newer men's toiletries were tabulated and older items such as hair tonics and hair dress'ngs along with regular style shaving creams were eliminated.

In a survey of men's apparel stores in the New York area 272 stores were asked if they carried men's toiletries, 15 per cent said they sold them. Of these almost 25 per cent were men's furnishing stores and 20 per cent were clothing stores.

More than 47 per cent of these stores have carried them over a year, and 52 per cent have carried them for less than a year. But apparel dealers are adding toiletries to their stocks almost weekly. Many stores indicated they are aware this new field is growing rapidly and plan to add men's lines.

Of those stores that carry these lines, 57 per cent carry more than one brand. The majority carry three or four brands although several carry more. Some 43 per cent carry only one brand, but these are trying it out to see its sales appeal.

L'Orle is the leader in sales volume in the apparel stores surveyed and is carried by 50 per cent of the stores. King's Men ranks second and is carried in 33 per cent of the stores. Helene Leibert and Man of Manhattan are tied in third place for sales.

Bringing up that old argument about whether most men's toiletries are bought by women as gifts, these retailers said that an average of more than 54 per cent of all toiletry items are purchased by men. Allowing for a large percentage of men's toiletries purchased as gifts by women, this figure indicated that there is a growing acceptance of

Does your cork sell as well as seal?

LEADING PACKAGERS know that a cork which comes out quickly and cleanly creates a first impression of quality. It's a favorable impression that customers carry over into their judgment of the product itself, one that builds satisfaction and repeat sales.

That's why manufacturers have been buying top-quality corks from Armstrong for the past 86 years. They provide reliable protection for your product—seal and re-seal your package with complete dependability.

To give your packages extra sales appeal, order your corks from Armstrong. You're sure of getting top-quality corks, skillfully cut and uniformly shaped from the finest imported corkwood, accurately and honestly graded.

For information about Armstrong's Corks—straight, tapered, shell, flange, or Embossed-Top—or any of the many other Armstrong Closures, get in touch with your nearest Armstrong representative. Or write to Armstrong Cork Company, Glass and Closure Division, 3809 Prince Street, Lancaster, Penna.

For favorable "first impressions"

ARMSTRONG'S CORKS and CAPS

The deep, demanding fragrance of Witchery perfume by Primrose House, is captured in a crystal clear bottle with a frosted glass stopper. The bottle is decorated with a gold lace label and rests on gold satin inside a black satin box.

Prince Matchabelli will introduce Crown Jewel, a new perfume from Paris, which has all the ardor and radiance of a rare gem. Crown Jewel is handsomely packaged in a golden crown bottle held in a jewel-like, crystal clear setting.

The Natone Co. offers an interesting lucite lipstick "bar" that has compartments for four lipsticks of different makes or shades, together with a royal sable lipstick brush that has a gracefully tapered handle of plastic to match the lucite stand.

these products by men who are willing to buy them for themselves.

When about two-thirds of these dealers were asked if they planned to promote men's toiletries more widely, they said they did not know. This is probably due to the fact that many of them have carried these products for such a short time that they do not feel able to state what their plans will be. Of those stores that planned to push men's toiletries more widely, only a small part intend to promote them outside the store-by mail. Others have schemes through instructions to salesmen and counter and window display.

Although the apparel stores surveyed are in general rather indefinite about their plans, they do feel there is a future in men's lines. When asked what trend sales would take, 57 per cent said they would go up, another 12 per cent said that sales would stay the same, and some 16 per cent felt that they will go down. Without exception, all retail stores now selling men's toiletries that have made some plans for the future, intend to continue selling them.

Streamliner

Egmont Arens, well-known industrial and package designer, is now publishing a news-letter, "Streamliner," because "We want our friends to enjoy with us some of the interesting things that keep happening in our shop. What with new ideas and new problems, coming in every day, our work is so darned interesting, we sometimes marvel that people PAY us for what we do. I hope we can convey some of our own excitement in these pages."

Drug Store Survey

More than eight out of the American housewives prefer to shop for their general drug and health needs in drug stores handling a wide variety of drug and medical items and specializing in prescriptions, according to a survey by the Home Makers Guild for the Owens-Illinois Glass Co.

Consultants indicated a marked interest in seeing the pharmacist fill prescriptions, since nearly 58 per cent favored a semi open type of prescription department and 27 per cent chose an open department where the pharmacist and all parts of the department could easily be seen. Only 15 per cent voted for a completely closed department.

Luxury and sweetness are combined in this charming sky-blue gift ensemble of three Charles of the Ritz Spring Rain favorites—parasol bottle of cologne, dusting powder and the new Spring Rain body sachet.

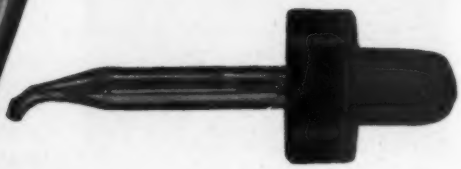
Suzy's Ecarlate ribbon box, deluxe edition, makes its appearance. On the luxurious red satin, there is a bottle of Ecarlate perfume in clear glass head with a saucy Suzy sailor, Eau de Parfum and cream lotion, bath essence, and dusting powder.

Allen B. Wrisley has added a new line of bath items called Blue Fern, attractively packaged in blue and silver. Cologne, bath powder and bath oil all come in the Blue Fern Fragrance and are available in attractive gift sets.

New Perfection
DROPPING PARTS
ARE
THE BEST
FOR
YOUR PRODUCT

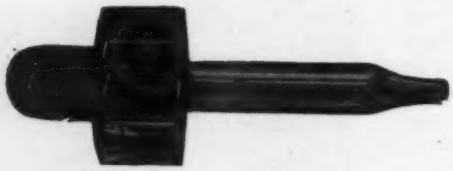
1

(1) Non-rolling, extra depth, Bakelite Cap with thick flange rubber part: Saftee ball glass.



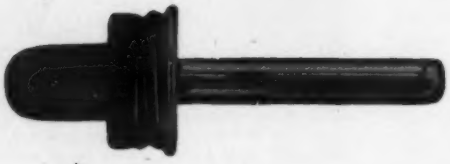
2

(2) Double shell metal cap; special thin flange rubber part; special bent glass.



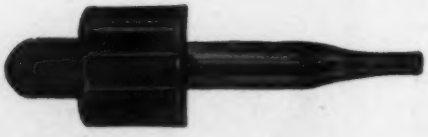
3

(3) Regular or acid resisting plastic cap; regular rubber part in various colors; semi-blunt glass



4

(4) Single shell metal cap; thin flange, non-swelling Amekine synthetic rubber part, without strong odor; blunt glass.



5

(5) Fancy colored beetle cap; midget rubber part; regular straight glass.

New Perfection dropping parts can be used with a variety of products because of the many different styles and sizes of caps, bulbs and dropper glasses that can be made up.

For those who do not have their own bottles, we can supply our New Modernistic design (with the dropping parts) in Amber, Blue, Flint and Green in 2cc, ⅛, ¼, ½, 1 and 2 oz. sizes. We invite you to write for samples and prices.

"Glass Goods of The Better Kind"

PENNSYLVANIA GLASS PRODUCTS CO.

428-432 N. CRAIG ST. PITTSBURGH, PA., U.S.A.

Simplicity of line marks this Mark Cross gift set for men which holds after shave lotion, after shave cream, men's deodorant, shaving bowl and after shave powder.

Chen Yu is introducing Jadestick in simulated jade plastic matching a piece of rare jade from the Metropolitan Museum. This case is designed for "the woman who loves luxury and wants her beauty accessories to be beautiful."

Bottles set in a recessed base for better visibility is the new feature of the two and three piece Swagger gift sets being featured by Regent Labs. Inc. The single bottle window box containers as well as combination sets, show a dapper Swagger man-about-town and bellboy.

In buying liquid prescriptions the housewive wants to be able to see the color of the product, 66 per cent of the consultants favoring clear glass bottles for this purpose as compared to bottles of various colors.

For dry prescriptions, which includes tablets, salves, ointments and powders, housewives preferred glass over any type of container.

Women shoppers prefer displays which do not obstruct the view of the interior of the store.

Nearly 35 per cent of the consultants reported that they entered a drug store daily, every other day, or twice weekly. At least seven out of ten enter a drug store weekly or more often, 62 per cent indicated that they bought three or more items.

Except for the far west, notably California, consultants have not had much experience with self service drug stores. Less than 20 per cent reported that they had ever shopped in a self-service drug store. Most preferred drug stores operated generally as they are now rather than the self-service type.

More than three out of five of the women would prefer to make purchases from women clerks when shopping for feminine hygiene needs in drug stores.

Fashion Point

About a year ago Campana introduced its Solitair "Fashion Point" lipstick. The most startling difference between this lipstick and others, was the point, which instead of being a conventional bullet shape or wedge shape, was curved and slanted to fit the lips. According to a survey made by Campana, 54 per cent of the women using lipstick wore their stick down to a slant. Further investigation by the firm confirmed that a lipstick with a curved and slanted point was better adapted to the shape of the lips, made application simpler, easier, and more accurate. A year ago the war with Japan was still on and although Solitair lipstick was introduced in a black metal case, this case was admittedly a stop-gap until the end of the war would make brass again available. That day is now, and Solitair lipstick now comes in a new case which is unique in several ways. The top of the case is shaped to duplicate the slanted and curved shape of the lipstick inside. Another feature is that the color shown on the top of the case is the color of the lipstick inside.

Solon Palmer offers its Dress Parade perfume in a new half-ounce bottle. The heady, exciting scent comes in an attractive plume-tipped bottle for gift giving.

The Solitaire Fashion Point lipstick is now available in a metal case whose top is shaped to duplicate the shape of the lipstick inside. In addition, shade selection is made easy because the color shown on top of the case is the exact color of the lipstick inside.

Shulton has added the Beauty Box to its Early American Friendship's Garden toiletries. The Beauty Box features the characteristic coloring that marks the line and the beveled cover opens to reveal a mirror. It holds regular sizes of dusting powder, toilet water and a bottle of body sachet.

The Gothic Cathedrals of Europe stand as one of the world's most impressive examples of craftsmanship. Characterized by extraordinary lightness and verticality, their design has been an inspiration to architects all through the years.

AN INSPIRATION IN STONE

It is said that the beauty attained in the originals can never be truly imitated, for it was not only the design but also the painstaking skill and care exercised by the individual workman, which helped lift these edifices from the realm of the ordinary into that of the superb.

We at Carr-Lowrey appreciate the values of craftsmanship . . . of work carefully done. It is our constant guide in making glass containers for discriminating packagers. Perhaps that's one reason why the name Carr-Lowrey has occupied a place of high esteem for over 57 years.

CARR-LOWREY GLASS CO.

Factory & Main Office: Baltimore 3, Md. • *New York Office:* 500 Fifth Ave. (18) • *Chicago Office:* 1502 Merchandise Mart (54)

"THAT'S SUCH A NICE *Clean Looking* STORE"

THESE handsome, gleaming, sparkling, glass packages lend a *modern,* clean atmosphere that makes customers want to come into a store. They've paid big dividends in extra impulse sales, too.

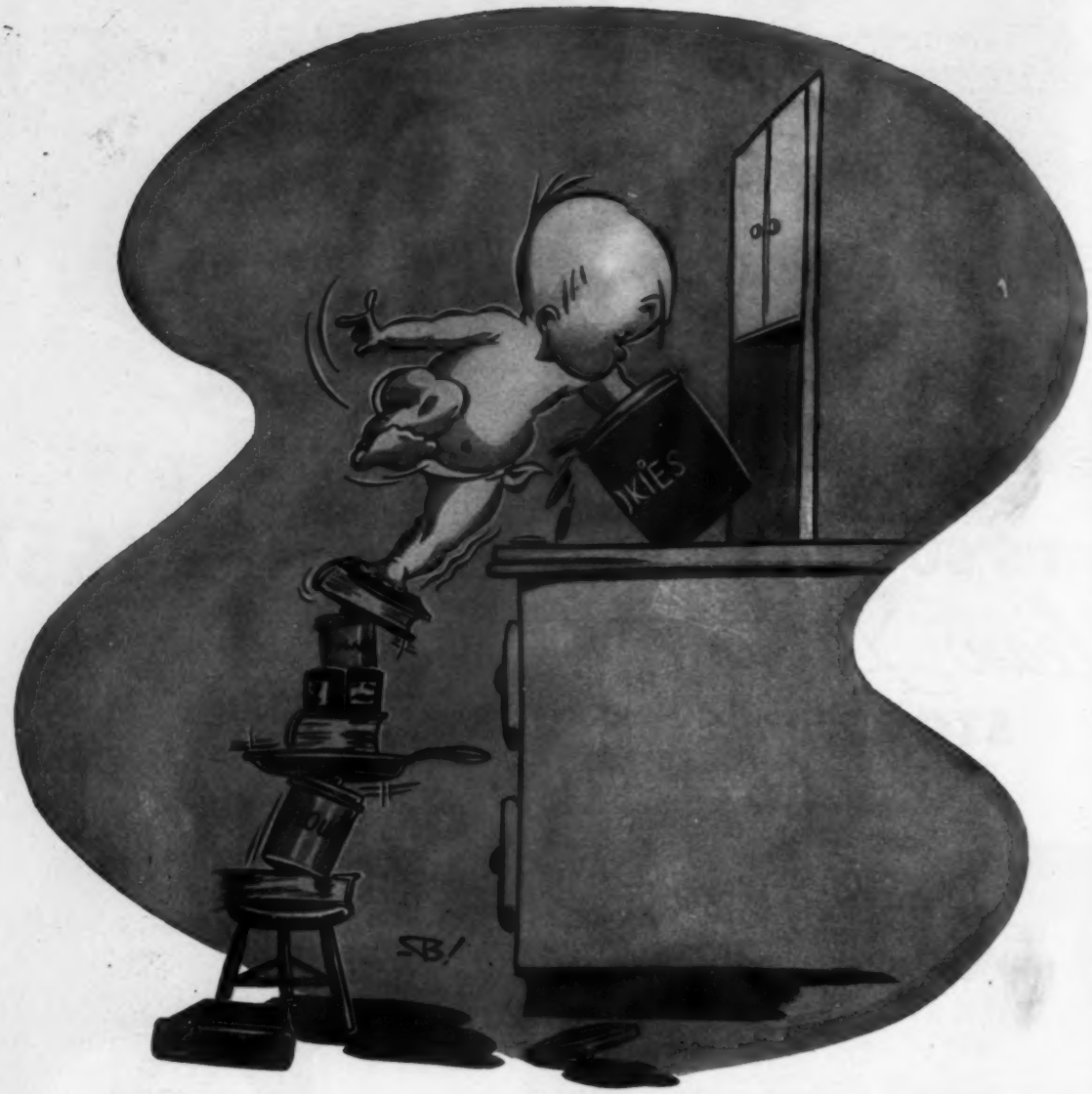
Drug and chemical manufacturers have made products packaged in Anchorglass pay off. Because Anchorglass containers invite product inspection, recognition and acceptance. They lend the appearance of genuine quality to your products. They're convenient, too, because they provide easy accessibility to contents and can be effectively resealed again and again until empty.

Of vital importance to drug and chemical manufacturers is the fact that Anchorglass bottles prevent evaporation or absorption of moisture. Being chemically inert, they preserve all the original strength, curative or other qualities peculiar to your products.

Anchor CONTAINERS and CAPS

Tune in "Casey, Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO



Ingenuity PAVED THE WAY!

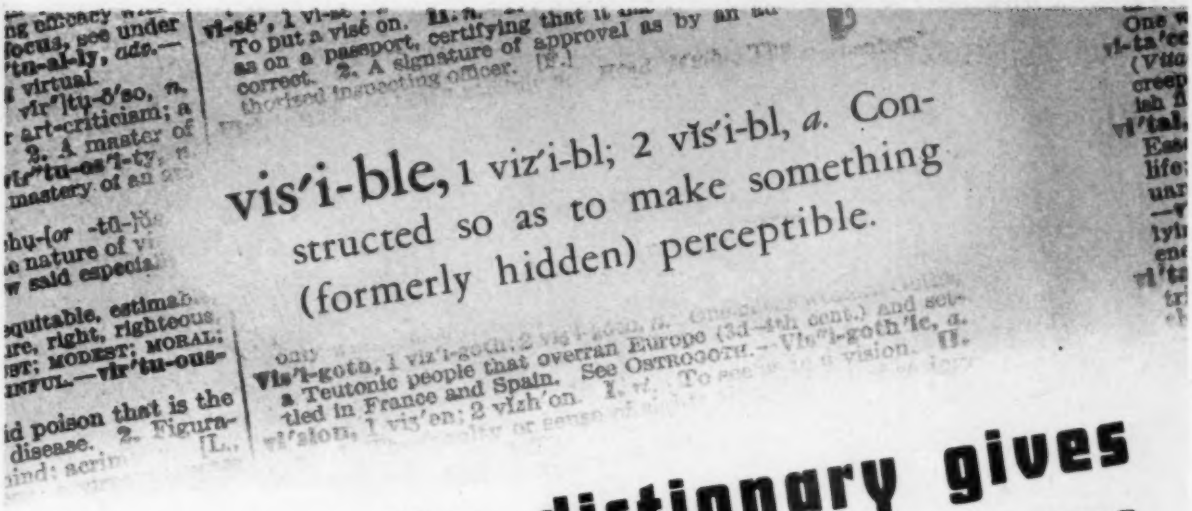
Ingenuity paves the way in modern container-making too! **National,** through its ingenious application of materials and methods, explores all the possibilities of metal packaging to help solve your problem.

Under the capable supervision of craftsmen . . . on specially developed equipment . . . in plants strategically located, **National** produces a complete line of metal containers that will protect your product on the commercial highways of today.

Our sales representatives, technical and laboratory staffs are available to you without obligation. Sales offices and plants in principal cities.

NATIONAL CAN CORPORATION

Executive Offices: **110 EAST 42nd ST., NEW YORK 17. N. Y.**



... even the dictionary gives a reason for using GLASS!

Why have hundreds of practical-minded manufacturers turned from opaque containers to Knox glass? Because glass adds to every other factor of a package the exclusive advantage of letting the customer see what she is buying or using.

When a product has definite eye-appeal, as in nail polishes, leg lotions and the like, a Knox container will impel the shopper to choose your product in preference to less effectively displayed goods. And even if there is no factor of color, Mrs. Customer will appreciate being able to see at a glance how much she is using and how much she has left.

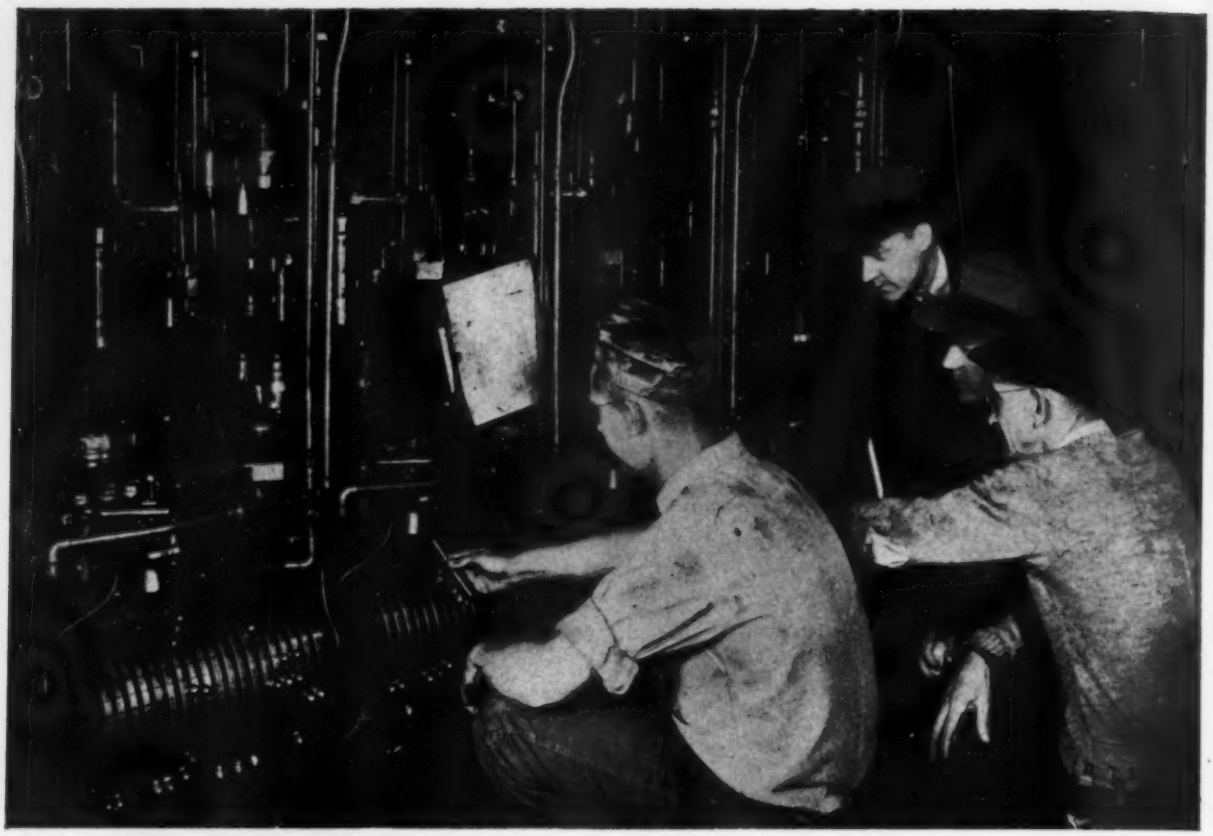
A Knox representative will gladly discuss with you the advantages which a Knox container will give to the selling and use appeal of your product.

EVERY KNOX Container A BOOST

FOR YOUR PRODUCT

KNOX GLASS ASSOCIATES, INC., Knox, Pa.

Knox Group Operating Eleven Modern Plants Strategically Spotted Throughout the United States



"More ways to make a bottle than you can count"

You're watching Cy Robinson set the timing drum on a bottle-making machine in Armstrong's Millville, N. J., glass plant. Bill Herman, shift foreman, is giving a couple of Armstrong's salesmen an idea of the knowledge, training, and skill behind this operation.

"Each of these timing drums," Bill is explaining, "consists of 19 rings. Each ring has 320 settings on it. Figured out mathematically, there are more ways to set the drum than you could ever possibly count!"

With such a tremendous number of settings possible, it is easy to understand why years of research and experience are required to arrive at the most efficient combination for each bottle. Many of the techniques involved in making top-quality glass are similarly complex.

It's easy to understand why everywhere they go in Armstrong's plants, Armstrong's salesmen find veteran workmen on the job. Men like Cy and Bill, who combine 53 years of glassmaking experience.

From these men, our salesmen get more than an insight into the fascinating difficulties of good glass and closure production. They acquire also practical, down-to-earth information that helps them do a better job of servicing your glass and closure needs.

For complete information about Armstrong's Glass and Closures, see your Armstrong's representative, or write direct to Armstrong Cork Company, Glass and Closure Division, 3809 Prince Street, Lancaster, Pennsylvania.

LESSON 1 FROM THE SALES PRIMER:

Packaging for Profit

A Women buy ¾ of all the goods sold at retail.

B Women make ¾ of their buying decisions at the point-of-sale—which means that they decide *what brand to buy* when they are in the stores shopping. (*Confirmed by national retail surveys.*)

C Great merchandising organizations exploit that fact. They know that to women, shopping is "*looking*" . . . that *appearances* mean much to them. So they always give preferential display (other things being equal) to products that come in the best looking packages!

MORAL:

Never underestimate the power of the package! The package that attracts the eye, arouses interest—and makes a better impression of *quality within*—WINS SALES!

LET RITCHIE WORK WITH YOU to develop a better package at low unit cost. One that will instantly identify, fully protect and conveniently dispense your product—practical—production-planned—easy to fill or pack—to handle, to stack and display—but above *all* designed for eye-appeal, for quality impression—A PACKAGE THAT SELLS!

Never Underestimate the Power of the Package!

W. C. Ritchie and COMPANY

★ SET-UP PAPER BOXES
★ FIBRE CANS
★ TRANSPARENT PACKAGES

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS • MILWAUKEE • ATLANTA • NEW ORLEANS • DENVER • PORTLAND • SEATTLE • MIAMI

The jar illustrated is AW-7161, especially suitable for cleansing and theatrical creams

WHEN BEAUTY COUNTS...

choose the container that enhances your product

Add to the distinction of your product by giving it a container with *individuality*. The standard Duraglas drug, chemistry and toiletry line contains more than 1400 different sizes and shapes. By choosing from this wide range, and adding a distinctive label, you get a container that is really your own!

A standard container gives you important savings in original cost and on your filling line. And every standard Duraglas container brings you the additional advantages of maximum dependability and economy . . . handsome functional design.

Examine the Duraglas container line. You're almost certain to find a container that meets all your requirements. Write us for full particulars.

Duraglas CONTAINERS—Protectors of Quality

TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY, TOLEDO 1, OHIO Branches in Principal Cities

Famous Plastics

FOR FAMOUS MERCHANDISE . . .

PEGGY SAGE cosmetics are typical of the famous quality merchandise graced by beautiful, serviceable closures of Plaskon Molded Color. ☆ The high utility value of Plaskon enables it to meet varied physical characteristics of drug products. Plaskon is completely impervious to the effects of alcohol, acetone, or other common organic solvents. It is not affected by oils and fats; is odorless, tasteless and inert. ☆ Plaskon is available in a wide range of attractive, permanent colors, and can be molded into distinctive designs and shapes to help catch the eye and make sales. ☆ Ask your molder to demonstrate all of Plaskon's advantages. And experienced Plaskon men will help adapt Plaskon Molded Color to your particular requirements.

PLASKON DIVISION • Libbey-Owens-Ford Glass Co. • 2110 Sylvan Avenue • Toledo 6, Ohio

Canadian Agent: Canadian Industries, Ltd., Montreal, P. Q.

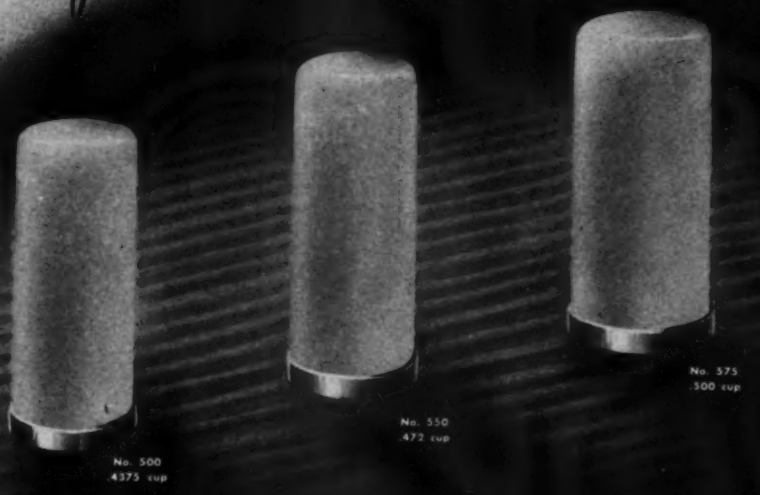
PLASKON

TRADE MARK REGISTERED

MOLDED COLOR

Bright, polished, gleaming BRASS

SWIVEL LIPSTICK CONTAINERS



"Fashioned Like Jewels"

SPECIAL FREE-WHEELING CONSTRUCTION

{ With Plastic Caps For Lighter Weight and Flexibility of Design, Or With Brass Caps to Your Specifications }

DeLuxe bright polished brass lacquer finish

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TRafalgar 7-0092

Quality---

how it applies to bottles

The word "quality" does not mean merely something expensive—it means something that serves you better, that lasts longer, that involves finer workmanship, that has more inherent beauty.

For instance, when folks speak of the "quality" of SWINDELL bottles, they refer to their beauty of design, their sturdiness and durability, their dependability, and their uniformity.

"Quality" doesn't just happen. In the case of SWINDELL bottles, it is the result of 100 years of experience and "know-how." Whether private mould or stock, hand-made or machine-made, SWINDELL bottles have that fine quality which results in your greater satisfaction.

SWINDELL BROTHERS, Inc.

200 FIFTH AVE., NEW YORK ★ BALTIMORE 30, MARYLAND ★ ROBERTO ORTIZ • HAVANA, CUBA

Swindell

THE OVAL THAT SCORES . . .

The sales score is what makes the difference in selecting the bottle for your drugs and cosmetics. That is why Marion Ovals are top choice with discriminating buyers. Neat appearance of smartly designed Marion Ovals plus their attractive closures and generous label space put them over the goal line in a game that is for keeps. Yes—for that winning play—choose Foster-Forbes glassware.

FOSTER-FORBES GLASS COMPANY

MARION, INDIANA, U. S. A.

Sales Representatives

ST. LOUIS • NEW YORK • CINCINNATI • DETROIT • CHICAGO • CLEVELAND • ST. PAUL
MILWAUKEE • ATLANTA • KANSAS CITY • MEMPHIS • LOUISVILLE • HAVANA, CUBA

WITH A ¼ Turn OF THE Anchor Amerseal Cap

THE Anchor Amerseal Cap is a quick-acting, dependable closure that seals or reseals with a simple quarter turn. It speeds packaging because it may be started at any point on the container finish. And it's adaptable for hand, hand chuck or machine closing operations.

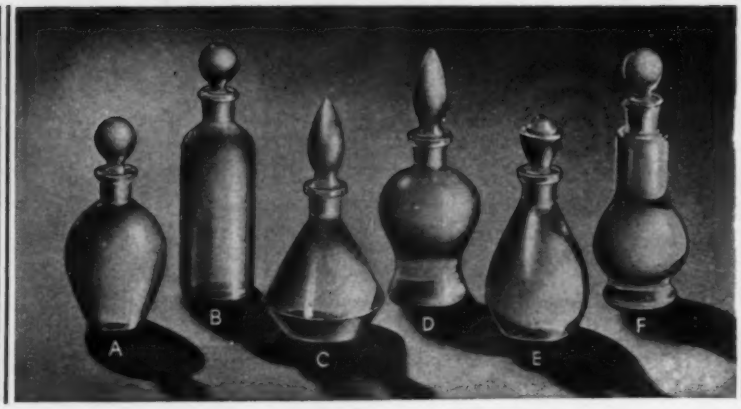
Equally spaced, double-notched lugs in the Amerseal Cap grip the underside of the glass threads and pull the liner down tightly, insuring uniform distribution of pressure all the way around the container finish.

This easy removal and reseal feature has made the Amerseal Cap the most popular closure with housewives over the years. That means she buys more packages sealed with Amerseal Caps. That means more sales, more profits for you.

Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO



A . . . Tear Drop
B . . Plain Round
C K-105

D K-101
E . . . . . Pear
F . . . . . Bulb

DISTINCTIVE PERFUME BOTTLES

Available in 1/4 oz. — 1/2 oz. — 1 oz. Sizes

These unusual designs in fine, handblown, crystal-clear Perfume Bottles are truly collectors' items . . . and, of course, they come from the hands of RICHFORD Craftsmen.

Each stopper is guaranteed to be leakproof, and is 400 grit ground. . . . A continuous supply of these distinctive Perfume Bottles may be depended on, either with or without beautiful plexiglass containers.

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CABLE ADDRESS "RICHFORD, N. Y."

TELEPHONE
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For Distinctive Glass Containers Set Your Caps to Bonglaco

containers and closures of every description for the cosmetic, drug, chemical and food trades.

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Stock on hand — Prompt Deliveries — Attractive Prices

We'll PACKAGE *Anything*

Let our Engineers and Analysts solve your problems. We'll design package, assemble Gift-Kits, Ship, etc. Facilities include warehousing and unlimited resources. Your obligation-free inquiries invited.

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Packaging AND SHIPPING SERVICE, INC.

100 POPLAR STREET, SCRANTON 1, PA.

FRESHEN UP YOUR PRODUCT WITH LUSTEROID VIALS AND TUBES

Like a breath of Spring, these modern plastic containers can give new life to your product and make sales grow.

Light as a feather, yet strong, rigid, unbreakable. LUSTEROID protects as it displays through its crystal-clear walls. It's economical, too, because it can be printed and thus save labeling costs. Its light weight reduces packing and shipping expense.

All colors of the rainbow . . . clear or opaque. Sizes from ¼" to 1¼" in diameter. Lengths up to 6". Cork, slip-on or screw-cap closures. Write for details.

LUSTEROID CONTAINER CO., Inc.

Formerly Lusteroid Division of Sillcocks-Miller Company

Office and Factory

10 W. PARKER AVENUE, MAPLEWOOD, N. J.

MAILING ADDRESS: SOUTH ORANGE, N. J.

SOLKA-FLOC, a unique Brown Company product, is a finely divided, chemically purified cellulose fibre. It is steadily finding wider uses in industrial operations for both process and product improvement.

Unexcelled in purity and uniformity, SOLKA-FLOC is produced in a wide variety of physical forms giving unusual combinations of technical properties. Members of the line are unique in the filler field, being excellent binders from non-abrasive organic origin, low in specific gravity and of negligible ash content. The color range of SOLKA-FLOC is from natural cream to pure white. A variety of fibre lengths is available; bulk, apparent density, and absorbency can be controlled. This rare combination of properties has proved its merit in commercial application and SOLKA-FLOC is being profitably adapted to use in the following fields; rubber, plastics, adhesives, protective coatings, ink, filtration, plastic wood, decorative coatings, cosmetics, etc.

For details on how SOLKA-FLOC may be employed to extend supplies of more critical materials, produce new or better finished products, or facilitate manufacturing operations, address our Technical Service Department. Full help will be granted gladly, regardless of your operations, and adequate samples of SOLKA-FLOC supplied.

*Reg. Trade Mark

BROWN COMPANY

FOREMOST PRODUCERS PURIFIED CELLULOSE

CUSTOM MADE

Accurately to Your Specifications

● **REGULAR DROPPER** . . . a standard quality dropper made to any desirable size using the best of materials and the finest workmanship. Completely assembled.

● **CALIBRATED DROPPER** . . . accurately made to any graduated scale to insure correct readings. Plastic Cap, Natural or Synthetic Rubber Bulb, No. 2 Clear Glass, Blunt End, Completely Assembled.

● **SERUM DROPPER** . . . can be made to hold any specific number of CC's desired. Expert workmanship assured in each dropper. Completely assembled.

A Dropper to fit Your Every Need!

FOR SAMPLES AND QUOTATIONS WRITE TO

totus PHARMACEUTICAL LABORATORIES

PHILADELPHIA PENNSYLVANIA

....LAST WORD IN "ON THE PACKAGE" PRINTING SENDS HELENA RUBINSTEIN'S "HEAVEN SENT" OUT INTO THE WORLD SELF-ASSURED AND LOVELY IN ITS PERFECTION.

SILK SCREEN PRINTERS TO THE COSMETIC FIELD

CREATIVE PRINTMAKERS, INC.

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LABOR SAVING DEVICES on SEWING MACHINES BUILT to ORDER

for

POWDER PUFFS • SACHET BAGS
COMPACT BAGS • COSMETIC BAGS, etc.

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SEWING MACHINE CORP.

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1—World automatic Straightaway Labeler.
1—No. 5 Sweetland Filter, 20 copper leaves.
1—Stokes Auger type Powder Filler.
1—Semi-automatic Labeling Machine.
5—Dry Powder Mixers, up to 2000 lbs.
20—Aluminum, Copper, Glass Lined, jacketed and agitated Kettles.
1—Abbe Blutergess Sifter No. 2.
2—Colton No. 3 Toggle Presses.
3—Stokes Steam Water Stills, 5, 10, 25 gal. per hour.
2—60 gal. Aluminum Steam Jacketed Kettles.
1—80 gal. Aluminum Steam Jacketed Kettle.
5—Stokes "R" single punch Tablet machines, maximum 2½" dia. tablet.
4—Colton No. 5½ single punch Tablet machines.

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Kimble NEUTRAGLAS Serum Containers

Serum bottles and vials of Kimble Neutraglas — highly resistant to solvent action and chemical attack — suitable for all types of closures — offer utmost protection.

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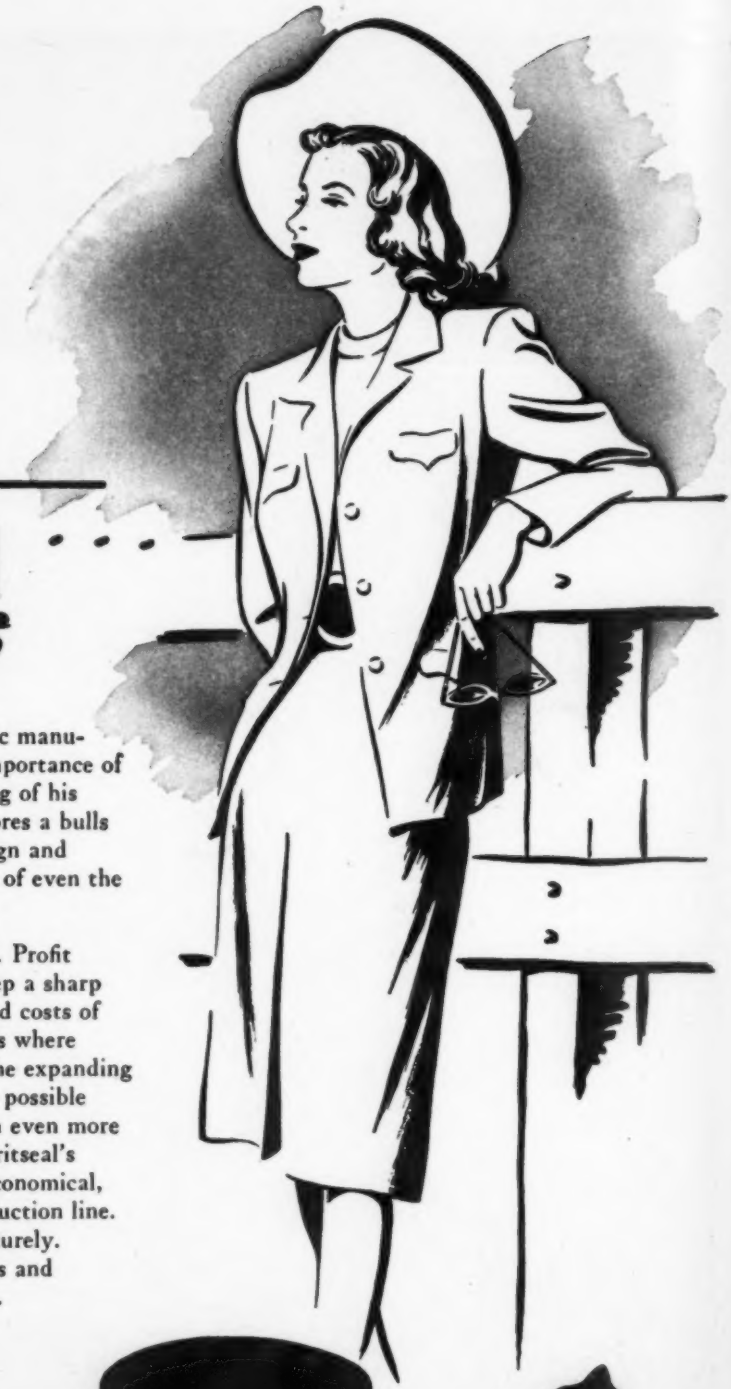

We've never heard of a cosmetic manufacturer underestimating the importance of appearance in the merchandising of his product . . . and Meritseal scores a bulls eye on this point. It's trim design and beauty enhance the appearance of even the finest cosmetic package.

But beauty alone is not enough. Profit minded manufacturers must keep a sharp eye on costs . . . first costs, and costs of application and handling. Here's where Meritseal makes fast friends. The expanding demand for Meritseal has made possible price reductions that make it an even more attractive buy. In addition, Meritseal's patented construction assures economical, efficient application on the production line. They spin on freely and seal securely. We'll gladly send samples, prices and complete information on request.

Meritseal —

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Division of
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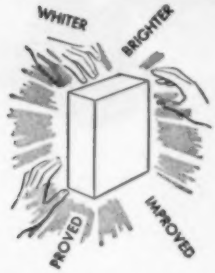
.... MAYBE ONE OF THOSE TWO FAMOUS GARDNER-RICHARDSON FOLDING CARTONS IS JUST WHAT YOU ARE LOOKING FOR



Coated Lithwite Cartons: Made of the revolutionary clay-coated paperboard pioneered by Gardner-Richardson. Proved and improved for seven years. Whiter. Brighter. Its smooth, hard, chalk-free surface insures sharper, more brilliant printing... makes more eyes reach for your product in modern mass displays. Facilities are being expanded to increase *Coated* Lithwite production (currently oversold), making it available in a greater range of sizes. Why not write for additional information?

Hydrotite Cartons. Made of a time-tested paperboard with three-layer construction. Asphaltic center layer retards to a high degree both the entrance and the escape of moisture. Helps guard against weight losses and moisture absorption. If you have a product which requires effective (very high, but not 100%) protection, *Hydrotite* may be the answer to your needs. Why not find out? Ask us—without obligation—to make up some sample *Hydrotite* cartons to test in your laboratory and in your machines.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard • Middletown, Ohio

Sales Representatives in: Boston • Chicago • Cleveland • Detroit • New York
Philadelphia • Pittsburgh • St. Louis

response *Pbility*

The ability of a package to win sales response for your product is a true test of its worth. And for years Warnercraftsmen have made it their responsibility to create such impressive eye-appealing containers for their customers.

For packages of distinction in color, design and workmanship choose Warnercraft — "the finest word in packaging" and watch your sales mount.

WARNERCRAFT

"THE FINEST WORD IN PACKAGING"

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

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Main Office and Factory: 325 Lafayette Street, Bridgeport, Conn.
New York Sales Office: 200 Madison Avenue, New York, N. Y.

NEWS...

Fritzsche's 75th Anniversary

Fritzsche Brothers, Inc. is celebrating the 75th anniversary of the founding of the company. Established under the

FREDERICK LEONHARDT

name of Fritzsche, Schimmel & Co., at 62 Cedar St., New York on August 28, 1871, the company was at that time headed by Paul T. Fritzsche, a brother and co-partner of Herman T. and Ernest T. Fritzsche, of Schimmel & Co., Leipzig, Germany. In 1876, the company expanded into new quarters at 48 Barclay St., New York. In 1877 the name of the firm was changed to Fritzsche Brothers, and shortly after a factory was operated in Hoboken, N. J. Still another move for expansion was made in 1885 to 34 Barclay St. Paul Fritzsche died in 1886, and his two brothers in Germany replaced him with

JOHN H. MONTGOMERY

Carl Brucker, son-in-law of Herman T. Fritzsche.

The Hoboken factory was discontinued in 1892, and a new factory was erected in Garfield, N. J. under the direction of Dr. Frederick B. Power, assisted by Dr. Clemens Kleber, who was trained in the Schimmel laboratories in Leipzig. Dr. Power left for Borroughs-Wellcome research laboratories in Great Britian in 1896, and his place was taken by Dr. Kleber. Frederick H. Leonhardt, the present president of the firm, joined the company in 1894 to take over direction of the firm's technical activities. He also received his training in the Schimmel plant in Leipzig. F. E. Watermeyer, a newphew of the Fritzsche brothers, joined the firm in 1895 to take over direction of sales.

The Garfield factory was sold in 1900, and in the same year Hermann and Ernest Fritzsche withdrew their financial interest in the American branch which then depended on the capital of

Carl Brucker and F. E. Watermeyer. Dr. Kleber left the employ of the firm with the sale of the factory, but approached the firm in 1906 with a plan for building his own laboratory to manufacture, exclusively for Fritzsche Brothers, the items he formerly made in the Garfield plant. Mr. Brucker supported Dr. Kleber financially in this undertaking.

In 1899, the company expanded again by moving to 37 Barclay St. And in 1907, still another expansive move was made to 82-84 Beekman St., where the company for twenty-eight years, or until 1935 when the place was destroyed by a disastrous fire.

In 1913, Carl Brucker died and was succeeded by F. E. Watermeyer, a man of unusual ability, vision and integrity. The firm was incorporated in 1919. On the fiftieth anniversary of the company in 1921, a plan of group insurance was inaugurated which is still in effect. In October 1943, the company adopted a liberal pension plan without cost to the employees, and in November 1943, a personal security plan was established, giving employees and their dependents, without cost, group insurance coverage against hospital expenses, surgical expenses, and sickness and accident.

As the result of World War I, all connections with Germany were severed,

H. P. WESEMANN

and it became necessary to conduct research independent of Schimmel & Co. In 1924, Dr. Ernest Guenther, who had previously been assistant to Professor Dr. A. Hesse, authority on natural flower oils, joined Fritzsche Brothers as research chemist. In 1925, Dr. Guenther visited the lavender producing regions of France and surveyed conditions there. The results were so promising that Mr. Watermeyer and Mr. Leonhardt decided to continue and expand the survey, and from then on Dr. Guenther spent most of his time traveling through the essential producing regions of Europe—and finally, of every country

DR. ERNEST GUENTHER

in the world. This work, continued from 1925 to the present time, has given Fritzsche Brothers a wealth of information, and a unique picture of actual conditions prevailing in the production of

Dressed Right

Sealed Tight with a

DODGE MILBOSSED-TOP CORK

THESE two kissing deer mean just one thing to countless numbers of retailers and consumers —Vivaudou's Djer-Kiss. One important factor in the success of this popular Djer-Kiss Sachet is the attractive styling of the package. It's really dressed to sell. See how clearly the figures and name stand out on the skillfully embossed Dodge Milbossed-Top Cork.

Distinctive and colorful, these Dodge closures are easily removed from a bottle and easily replaced. Made of high-grade natural cork and sturdy hardwood tops, they always assure a perfect air-tight seal. That is why a Dodge Milbossed-Top Cork is Vivaudou's choice to keep this perfumed powder dry and preserve the fragrance of the contents.

Your product, too, can gain individuality and sales appeal with an eye-catching closure. Put your name where it will be seen . . . right on top of a Dodge Milbossed-Top Cork—available in a broad range of sizes, colors and designs. Send us your specifications.

DODGE CORK CO., INC. • LANCASTER, PA.

DODGE CORK CLOSURES

designed to Guard the Integrity of the Contents

practically all essential oils used in the trade.

Mr. Watermeyer died in March 1934 and was succeeded in the presidency of the firm by Mr. Leonhardt, who not only was thoroughly grounded in the executive branch of the business, but

DR. A. J. NICOLAUS

who also possessed a solid technical background. The combination gave him unusual insight into those problems of standards which the company was attempting to solve. In 1928, Fritzsche Brothers acquired Les Parfumeries de Seillans, in the Province of Var, France. In this region grow jasmin, tuberose, mimosa, celery, etc., from the leaves, roots, or flowers of which oils and absolutes are extracted in the factory on the grounds.

Following disastrous fire at the company's headquarters at 82 Beekman St., the firm moved to its present location on the twelfth floor of the New York Port of Authority Building, at Ninth Ave. and 15th St. In 1937, following the death of Dr. Kleber, the factory at Clifton, N. J., through which he had served Fritzsche Brothers exclusively

JOSEPH A. HUISKING

for thirty-one years, was purchased, improved, and modernized by the company.

For the Diamond Jubilee of Fritzsche Brothers it was decided that the most fitting commemoration of the event would be the establishment of an Annual Award for scientific achievement in the field of essential oils and aromatic chemistry. The award will take the form of $500 in cash plus a gold medal to the person or persons making the most important contribution toward new or improved methods of analysis in the testing or examination of essential oils or aromatic chemicals. No member of the sponsoring firm is eligible to receive the award, nor will any member serve as judge. The judging committee will be composed of outstanding figures in trade and scientific associations.

Present top officials of Fritzsche Brothers are: President, Frederick H. Leonhardt; First Vice-president and Treasurer, John H. Montgomery; Second Vice-president and Secretary, Hans P. Wesemann; Third Vice-president and Chief Chemist, Ernest Guenther; Fourth Vice-president, Joseph A. Huisking; Director and Manager, Clifton Chemical Laboratories, Arthur J. Nicolaus.

Merck Streptomycin Plant

Merck & Co., Inc. has announced that production of streptomycin has started at its new $3,500,000 plants at Elkton, Va., and Rahway, N. J. Merck has notified the Civilian Production administration at Washington that a greatly increased supply of the new drug will be available for allocated distribution during September.

The new Elkton plant is not yet in full operation, but the company hopes to achieve maximum output by the end of the year. The increased production schedule for September will contribute to the widening distribution of streptomycin under the new CPA depot hospital program.

Heim—Lambert Production Mgr.

T. H. Heim has been appointed manager in charge of production at the St. Louis, manufacturing laboratories of Lambert Pharmacal Co.

Hartz to Celebrate 50 Years

In 1947 The J. F. Hartz Co., Detroit, Mich., will celebrate 50 years of continuous pharmaceutical manufacturing. Officers are: Albert B. Hartz, chairman; Richard Fisher, president and treasurer; Charles Davey, vice president and secretary.

Court Named Cutter Sales Mgr.

Donn Court has been appointed general sales manager for Cutter Laboratories, pharmaceutical and biological manufacturers.

Mr. Court is well known in the ethical medical sales field, as he formerly

DONN COURT

managed the Curity Suture business for Bauer and Black and was also sales executive in charge of dealer sales for all Bauer and Black products.

Sun Tube of Canada

Sun Tube Corp., Hillside, N. J., has announced the incorporation of Sun Tube Corp. of Canada Ltd. The new company will have a plant and executive offices at Ottawa with up-to-date facilities for the manufacture of tubes of all sizes and designs for the packaging of toilet preparations, food products and the like.

Wyeth Advances Siebert

Howard F. Siebert, technical director of the nutritional division of Wyeth Inc., has been appointed chief operating

H. F. SIEBERT

executive of the Mason, Belle Center and Rochester plants of the Wyeth organization succeeding W. F. Richards, who has resigned.

Van Vliet Named Squibb V.P.

Earle R. Van Vliet has been elected a vice president and treasurer of E. R. Squibb & Sons, by the board of directors of that company. Formerly Mr. Van Vliet was vice president and chief financial officer of Tubize Rayon Corporation before its merger with Celanese Corporation.

He takes the place of Edward G. Lowrey, Jr., who resigned as treasurer of E. R. Squibb & Sons to become president of General Reinsurance Co.

Lehn & Fink to Park Ave.

The Lehn & Fink Products Corp., has leased the entire 12th and 13th floors in the 21-story, office building, now in the course of construction at 445 Park Ave., covering the entire easterly Park Ave., block between 56 and 57 Sts. Along with this in the same building, a store and 5,000 feet of space on the second floor to be used by its subsidiary, Dorothy Gray Ltd., has also been taken.

The new building is scheduled to be completed by May 1, 1947, at which time the Lehn & Fink Corp., will move from 683 Fifth Ave., where its present quarters, occupied since 1928, have become inadequate to meet expansion needs.

Smith, Kline Protect Patent

The United States Court of Appeals for the 3rd Circuit sustained U. S. Letters patent owned by Smith, Kline & French Labs. covering amphetamine sulfate.

The decision came in a lawsuit involving patent infringement and unfair competition brought by the Philadelphia concern, in which it was charged that Clark & Clark, Wenonah, N. J., had been for some time, manufacturing and selling amphetamine sulfate, including obesity tablets and imitations of Smith, Kline & French Labs., "Benzedrine" tablets.

Lambert Sales Changes

J. S. Norton, executive vice president of Lambert Pharmacal Co., in St. Louis made known the recent changes in the company sales organization; F. W. Ballantine, general sales manager; H. Starrett, western sales manager; W. C. Herndon, southwestern sales manager.

Mr. Ballantine will make his headquarters at 545 Fifth Ave., New York; Mr. Starrett's will continue to be 300 Brannan St., San Francisco and Mr. Herndon will make his headquarters at 3817 Hanover St., Dallas.

Stone Joins Robert

Frank G. Stone has joined Henri Robert Inc., New York, and will be sales representative for them in the metropolitan area. Mr. Stone was graduated from Colgate University in 1941, and then spent four years in the Navy as a Lieutenant aboard an aircraft carrier. Upon his discharge from the service, he was associated for a short while with Schimmel & Co., Inc.

FRANK STONE

Enter Drug Business

Clark-Babbitt Industries, Inc., with the purchase of the Dr. J. F. True Co., Inc., have sponsored one new project, a pharmaceutical division.

The new plant will be located in West Hanover, Mass., and it is planned to manufacture and distribute well-known high grade pharmaceutical items, starting in September.

Package Machinery Buys WAA Plant

The Package Machinery Co., of Springfield, Mass., has acquired the huge Pratt & Whitney plant in East Longmeadow, Mass., from the War Assets Administration for expansion of the company's business in manufacturing wrapping machines. Purchase price was $1,750,000.

The plant was erected during the war at a cost of $3,000,000 and in one of the largest and most modern manufacturing properties in Western Massachusetts.

With the acquisition of the new plant, the company will be able to do work that formerly had to be sub-contracted in various cities throughout New England and other states. The new plant provides 361,000 square feet of floor space, newly acquired machines will be added to existing equipment and the number of employees increased from 650 to an expected 900 within the year, with an eventual force of 1,500.

Dr. Bosee Returns to Endo

Dr. Roland A. Bosee, now on terminal leave from the Navy, has returned to Endo Products Inc., Richmond Hill, N. Y. Dr. Bosee will be plant superintendent and direct his efforts toward coordinating the work of all Endo technical departments.

Prior to entering the service, Dr. Bosee held the position of director of laboratories. During the war he was based on an aircraft carrier and was involved in five major combat operations.

The drug and pharmaceutical group of the Packaging Institute has made plans for participation in the eighth annual meeting of the Institute scheduled for Nov. 25-26, at the Hotel Stevens, Chicago. Pictured here from left to right (front row) are; E. E. Nack, Sharp & Dohme, Inc., W. O. Brewer, Calco Chem. Div., American Cyanamid Co., H. E. Fortner, Ciba, (second row) J. H. Maget, Merck & Co., C. O. Kendall, E. R. Squibb & Sons, N. E. Foss, Calco Chem. Div., T. R. Aalto, Heyden Chemical Corp., and M. R. Brenner, Wyeth, Inc.

All three are vital to the making of Parenteral Solutions

Fine chemicals of measured purity

Your technical skill in manufacturing

Rigid laboratory control in your plant

Modern medical practice makes full use of the advantages inherent in parenteral solutions. These "protected medicines" combine the features of accurate dosage, sterility, and stability of assay.

In making these solutions, manufacturers use infinite care and skill. They achieve their results, not by a single factor, but by employing all three of these:

—They choose a fine chemical of uniform and dependable quality.

—They scientifically process all the ingredients into a quality-finished product.

—They maintain rigid laboratory control over the product throughout its manufacture.

These three factors are, indeed, all-important.

And the first of them—the selection of the basic fine chemical—can have much to do with trouble-free manufacture, and with the success of the finished product.

That's why it's good sense to choose fine chemicals with purity to the decimal.

Measured purity is the foundation upon which Baker has built its service for you. For many years, leading pharmaceutical and drug companies have known, and bought, Baker's fine chemicals (purity by the ton).

No matter what product you manufacture—if it requires one or more fine chemicals, specify Baker and you'll specify quality *at the beginning.*

J. T. Baker Chemical Co., *Executive Offices and Plant:* Phillipsburg, N. J. *Branch Offices:* New York, Philadelphia, Boston and Chicago

Baker's

FINE CHEMICALS

CHEMICAL KESSCO PRODUCTS SPECIALTIES

EMULSIFIERS

of Definite Specifications

GLYCERYL MONO STEARATE
PURE
AND
SELF-EMULSIFYING

KESSCO WAX A-21
FOR ANTI-PERSPIRANTS
DEODORANTS
OINTMENTS

PROPYLENE GLYCOL MONO STEARATE
PURE AND SELF-EMULSIFYING

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PHARMACEUTICALS
TOILETRIES
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ETC.

KESSLER CHEMICAL CO., INC.

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STATE ROAD and COTTMAN AVE. • PHILADELPHIA 35, PA.

Cosmochem Labs. Organized

Cosmochem Laboratories, Inc., have been organized by Jack B. Nagler and Nathan Gershaw at 4415, 16 Ave., Brooklyn, N.Y., to do a private brand business in lipsticks and other cosmetics. Dr. Nagler, a graduate of the University of Vienna, was formerly associated with the National Oil Products Co., and Mr. Gershaw was formerly with Chelsea Labs.

Triangle Purchases Rapp Mfg. Co.

The Triangle Package Machinery Co., of Chicago, has just completed the purchase of the assets and business of the Rapp Mfg. Co., Los Angeles, until recently its West Coast associate.

Operations will continue at the same location, 1501 West Jefferson Blvd., Los Angeles, under the name of Triangle Package Machinery Co.

Michel Export Changes Name

Michel Export Co., Inc., has changed its name to M. Michel and Co., Inc. The company still remains under the same ownership, and at the same address, 90 Broad St., New York 4.

Welch, Holme & Clark Move

Welch, Holme & Clark Co., Inc., have moved to new quarters at 439 West St., New York. The new telephone numbers will be Chelsea 3-6048, 6049, 6050, 6051.

Gillis Named in Argentina by J. & J.

John L. Gillis has been named vice president and general manager of Johnson & Johnson de Argentina, it has been announced by Arthur R. Clapham, director of overseas operations of Johnson & Johnson.

JOHN L. GILLIS

Mr. Gillis, who has served the past two years as vice president of Johnson & Johnson International, will make his headquarters in Buenos Aires. He plans to reach there in October.

A resident of Greenwich, Conn., Mr. Gillis is an authority on foreign trade. In 1944, he served on the special economic mission appointed by the State Department which toured Northern Africa, the Middle East and Italy to study the re-establishing of foreign trade in liberated areas.

Margolies Heads Countess Maritza

Countess Maritza Cosmetic Co., New York has elected Louis F. Margolies to the office of president.

Rolly M. Cain, president of Abbott Laboratories, is shown operating a power shovel during the ground breaking ceremonies for the expansion of Abbott research and administration buildings.

BIMS Golf Winners

About 100 members and guests of the BIMS took a chance on the threatening weather August 13 to hold their golf tournament at Winged Foot Golf Club, Mamaroneck, N. Y.

Among the winners were: James McInnes, Jr., of Commercial Solvents Corp.; Roger Kenna, of The Marlin-Firearms Co.; Walter A. Conklin of Evans Chemetics, Inc.; Douglas Mabee, Milton Small, Joe Eder of the Victor Metal Co.; Peter Forsman, C. H. Forsman Co.; Wm. F. Zimmerman; Paul Miller, Golden Fleeco Co.; Thomas F. Hickey, Buy-Lines; Charles M. Macauley, Pro-phy-lactic Brush Co.; Richard Grant Jr.; William Lambert, American Perfumer; C. W. Allen, Albert Verley Co.; Harry W. Heister, George Lueders & Co.; John V. Cavalero, Stelz Co., Inc.; Paul E. Forsman; Ray F. Ougheltree, Bri-Test Products Corp.; George P. Dunn, Smith & Nichols, Inc.; Dexter O. Neal; Frank L. Kiernan of Kiernan-Hughes Co.

Chinese Distributor

The West China Pharmacal Laboratories, Chengtu, China, desires the West China distributing agency for one or more American pharmaceutical and allied manufacturing companies. The West China Pharmacal Laboratories is the commercial division of the Department of Pharmacy of the West China Union University in Chengtu and is located on the University campus.

Companies interested in developing business in China in pharmaceuticals, chemicals and laboratory equipment should communicate as early as possible with Dr. E. N. Meuser, 5 Chilton Rd., Toronto, Ontario, who is now in Canada on furlough from China.

Vita Ray Names Davis

Harry R. Davis well known to the drug trade in the West Coast area has been appointed West Coast representative for products by Vita Ray in the drug and department store field.

J. T. Baker Plant Addition

Another unit for the organic chemical division of the J. T. Baker Chemical Co., has just been completed at Phillipsberg, N. J. The new structure, a modern well equipped building, will be used for the manufacture of a new group of organic chemicals now in the pilot-plant stage.

HENRI ROBERT INC.

News of Importance to AMERICAN PERFUMERS
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Distinctive American raw materials for perfume . . . in the French tradition

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HENRI L. ROBERT
CREATEUR DE PARFUMS

BACK FROM PARIS WITH MANY NEW IDEAS WILL PERSONALLY HELP YOU UTILIZE THESE THREE SOURCES OF OUTSTANDING RAW MATERIAL AND ENABLE YOU TO DEVELOP MODERN PERFUMES OF BEST QUALITY AND HIGHEST SALES APPEAL.

Jacob Manheimer Completes Seventieth Year in Essential Oil Industry

On September 11, more than a hundred friends and leaders in the essential oil industry gathered at the Savoy-Plaza Hotel to pay tribute to Jacob Manheimer on the completion of his seventy years service with the industry.

Mr. Manheimer who was eighty-two last August, started as office boy with the Leo Bernard Essential Oil house in 1876 when he was twelve years of age, at the princely salary of two dollars a week.

JACOB MANHEIMER

With the passage of the years, Mr. Manheimer rose steadily in the firm and in 1898 took over the business and established J. Manheimer Essential Oils. The firm which he still heads actively today. Though he no longer has to be at work at 5.30 in the morning as he did when he joined as office boy seventy years ago, he is at his desk at 8.15 every day except for those times when he is on the road for the company. "On the road," is a rather out of date designation for Mr. Manheimer, since he travels only by plane.

At the banquet, Gerard Danco, who presided, rose and informed Mr. Manheimer that it would only be fitting for the group to honor him on his anniversary by paying in the same kind of money and the same amount that he received for his first week's pay back in 1876. Accordingly, he presented Mr. Manheimer with an envelope containing two silver dollars.

Hormaganic Buys N. J. Plant

The Republic Varnish Company's plant in Madison, N. J., has been purchased by the Hormaganic Corp., pharmaceutical manufacturer, formerly of Jamacia, L. I. The plant had been occupied by the Endurette Corp., a subsidiary of the varnish company.

Rowe Elected Director

Richard S. Morse, president of National Research Corp., has announced the election to the board of directors of Hartley Rowe, vice-president and chief engineer, United Fruit Co.

Vitamin Foundation Committee

The National Vitamin Foundation, Inc., which organization has replaced the Institute for Vitamin Research organized in 1944, has appointed an advisory committee of eight scientists to assist Dr. Robert S. Goodhardt, scientific director of the Foundation. The committee, which will formulate an over-all research program on vitamins and which will approve specific investigations to be conducted through grants-in-aid to various established institutions, consists of the following:

Dr. Otto A. Bessey, Public Health Research Institute of the City of New York, Inc.; Dr. George R. Gogwill, Yale University, School of Medicine; Dr. Norman Jolliffe, Nutrition Clinic of the Department of Health of the City of New York; Dr. H. D. Kruse, Milbank Memorial Fund; Dr. Carl V. Moore, Washington University, School of Medicine; Dr. Severo Ochoa, New York University, College of Medicine; Dr. W. H. Sebrell, National Institute of Health; and Dr. Frederick F. Tisdall, University of Toronto.

Dr. Theodore G. Klumpp, chairman of the Foundation's board of governors, in announcing the appointments, said that the vitamin research program would be broad in scope "to permit the support of diverse projects likely to furnish information needed to fill in serious gaps in our knowledge of nutrition."

Under grants totalling $11,000, three investigations already under way are: Nutritional survey of the school children of Burlington, Vt.; investigations of the role of folic acid in leukemia; and quantitative studies of the effects of nutrition upon the susceptibility of mice to anaphylactic shock, planned as a first step in a long term program to identify the fundamental metabolic systems involved in anaphylaxis, allergy, and immunity.

Mr. and Mrs. Carl Nielsen shown aboard the S.S. Gripsholm before it docked in Sweden. They are taking part in a tour with 23 research and industrial executives representing American industry, and will visit industries in Norway, Sweden and Denmark.

Smyth Joins MM&R

Henry J. Smyth has returned to Magnus, Mabee & Reynard, Inc., after four years in the Army. Mr. Smyth, who was in the export department before he left for the service, now makes his headquarters at the Chicago branch office of the company.

HENRY J. SMYTH

Perfumery & Cosmetic Courses

The course in perfumery and perfume materials, which has been given at the College of Pharmacy of Columbia University by Dr. Wimmer for many years, will be taught by Edward Sagarin, author of the Science and Art of Perfumery, starting this fall.

In this course, Mr. Sagarin will cover the history of perfumery, the natural and synthetic raw materials of perfumery, their methods of production, utilization in odors and flavors, and the physiology and psychology of the sense of smell and related senses.

The course in the manufacture of cosmetics and toilet preparations, also formerly taught by Dr. Wimmer, is being reorganized and will be given by Professor Horace M. Carter, who has been connected with the pharmacy department of the College since 1927.

This course will be conducted on Tuesday evenings from 7.30 to 10.30.

Registration for either course takes place at the college 113 W. 68 St., New York. The perfumery course opens on Monday, September 30; the cosmetics course on Tuesday, October 1.

Bristol Laboratories Appointments

Two additions to the staff of Bristol Laboratories Inc., have been announced by Philip C. Sayres, president. They are George L. Wolcott, M.D., assistant

GEORGE L. WOLCOTT

medical director and Orrin M. Ernst, manager of market research.

Before joining Bristol Labs., Dr. Wolcott was medical director of Charles H. Phillips Chemical Co. During the war he served in the Medical Corps with the rank of Major.

ORIN M. ERNST

Mr. Ernst was graduated from the University of Minnesota and from Harvard Business school with the degree of Master in Business Administration. He resigned from the Vick Co., to join the Navy and was discharged last January with the rank of Lieutenant.

Janovsky Heads New Seeley Div.

In view of the expanded factory facilities, Seeley & Co., Inc., 136 Liberty St., New York, has announced that they have created an Essential Oils and Aromatic Chemicals Division for the production and distribution of its aromatic products and offer complete sales service to all of their customers.

Harold L. Janovsky, formerly the chief chemist and plant manager of the Farmingdale factory, has been appointed manager of this new division.

Mallinckrodt Buys Land

Mallinckrodt Chemical Works, St. Louis, has purchased for $60,000 two pieces of property in the vicinity of its plant in that city.

Northam Warren Jr. Succeeds Marshburn

Northam Warren, Jr., has been elected vice president and general manager of Northam Warren Corp., Stamford, Conn. Mr. Warren succeeds P. W. Marshburn, who resigned. John D. Yeomans, controller, assistant secretary and assistant treasurer, was elected vice president and director.

Fleuroma Appoints Hobein

Robert G. Hobein has been appointed as sales representative in the metropolitan area for Fleuroma Co. Mr. Hobein comes to his new position with a number of years of experience in the essential oil field.

White Labs. Buys for Expansion

White Laboratories, Newark, N. J. has purchased 125 acres of land in Kenilworth, N. J., for expansion of its plant.

Upjohn Plans Expansion

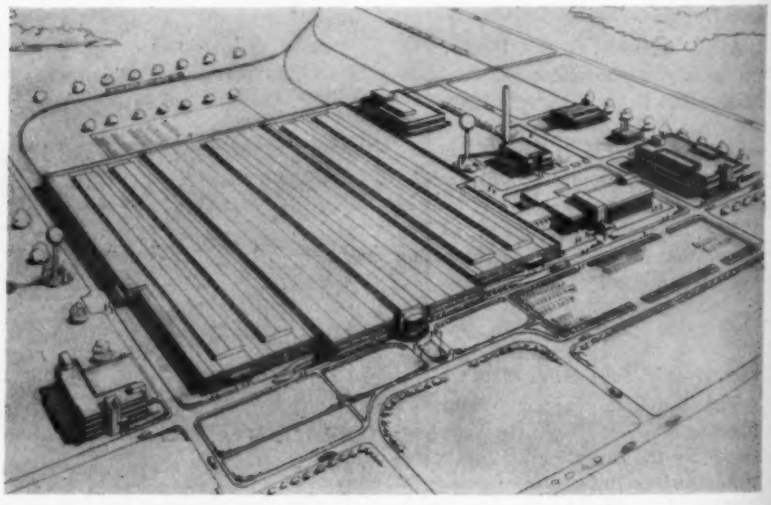
D. S. Gilmore, president and general manager of the Upjohn Co., of Kalamazoo, Mich., has made known plans for the expansion of its plants shown in the accompanying drawing. Some of the buildings are already under construction and expected to be completed in 1947.

The main manufacturing plant is

DONALD S. GILMORE

shown in the center of the picture with the recreation and cafeteria building as a wing at the south end of the plant. A research building is shown at the left of the building. The antibiotics plant at the extreme right, boiler house immediately behind it, and the adrenal cortex production unit east of the boiler plant are the buildings under construction.

The main manufacturing and warehouse building is 875 feet wide and 1120 feet long. It will have a structural steel frame, exterior walls of brick and a steel roof deck. There will be unobstructed floor space, the clear height is 14 feet to an insulated suspended acoustical metal ceiling. All manufacturing areas are to be air-conditioned for comfort and for the designed conditions called for by the various processes.



Architect's idea of the new buildings to be erected for the Upjohn Co., at Kalamazoo, Mich. Some of the buildings are already under construction and occupancy of these will take place in 1947.

ADVERTISEMENT—*This entire page is a paid advertisement* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

September ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1946

Reports Increased Yields and Speeds of Organic Reactions

Excellent Results with Use of Hydrotropic Salts Is Claimed

Many types of organic reactions may be accelerated and their yields increased by the use of hydrotropic salt solutions, according to the claims made in a recently published technical paper. The authors cite one case in which the yield was stepped up more than sixty per cent while appreciably cutting the reaction time.

Hydrotropic solutions are those aqueous salt solutions which effect decidedly greater solubility of slightly soluble substances than does water at the same temperature. Strong solutions of potassium iodide, for example, dissolve many times as much iodine as pure water. Typical hydrotropic salts are: alkali or alkaline earth salts of the sulphonates of toluene, xylene, or cymene, the alkali benzoates, thiocyanates, and benzoates, and even such common salts as the alkali bicarbonates, oxalates, and thiocyanates.

An excellent example of the effectiveness of hydrotropic solutions is found in the Cannizzaro reaction, the authors state. As ordinarily performed, this reaction is carried out by emulsifying benzaldehyde with caustic soda, and permitting the reactants to stand for one day. Normal yields in this reaction are usually about five per cent of the theoretical. When a saturated sodium cymenesulphonate solution, however, is substituted for most of the water, the yield is reported to be increased to 72.5 per cent and the reaction time slashed by several hours.

Extra Copies Available Of Illustrated U.S.I. Booklet

"U.S.I. in the World of Chemistry" is an interesting 48-page booklet which tells the story of U. S. Industrial Chemicals, Inc.

Full color pictures and charts show how solvents, alcohols, resins and other chemical building blocks "flow" into the everyday commodities of commerce. Copies may be obtained by writing to the New York office of U.S.I. on your letterhead.

Predicts Great Advances In Animal Nutrition

Tremendous strides will be made in the field of animal nutrition in the near future, according to a paper published recently by an authority on food and farm chemurgy. The progress expected, he asserts, will be made not so much in isolated fields, such as minerals, vitamins, enzymes, amino acids and hormones, but in fields which involve the physiological inter-relationship of all these products. The article reviews recent work in animal nutrition and farm chemurgy, and predicts future developments.

THE MONTH IN DETERGENTS

Photomicrographic movie techniques are used to study detergent action . . . A skin cleaner for use under conditions where carbon black, graphite, or pigments are handled is patented . . . The U. S. Government publishes new specifications on cleaning compounds containing synthetic detergents . . . A new method for evaluating the detergent efficiency of alkali cleaners is announced . . . A western company markets a new electronic soap dispenser . . . Mixtures of detergents and disinfectants containing quaternary ammonium compounds are said to be practical . . . A soap is made available for use in hard water, sea water, and acid solutions . . . German development of a valuable class of non-acid and non-alkaline detergents is revealed . . . A new synthetic detergent is described as a sulfonated fatty condensate soluble in water at all temperatures . . . An extremely mild felt-washing cation-active compound is made . . . A U.S. scientist perfects a rapid colorimetric method for the determination of fatty acids.

New-Type Recording Discs Preserve Historic Events

Instantaneous recording blanks, designed for high-fidelity sound reproduction, now make it possible for listeners to hear historic events exactly as they occurred, it was announced recently. These discs have captured a durable sound record of man's first contact with the moon, the atomic tests at Bikini, and other important contemporary happenings.

Much of the credit for the success of these new-type discs goes to a special coating based on nitrocellulose, the manufacturer states. This coating, on which the sound-track is inscribed, is said to guarantee excellent sound properties, and to insure complete freedom from deterioration. Unlike other discs which dry out and harden, these discs are reported to remain unchanged by age.

These new-type discs are supplied for reference recordings, for amateur or home recordings, for talking books, and for every recording use.

Sulfonamides Essential In New Hormone Process

An anterior pituitary-like hormone may now be separated from pregnancy urine by a new process involving the use of sulfonamides, according to the claims made in a patent granted recently. The sulfonamides, widely used as bacteriostatic agents, are employed in this process because of their alleged ability to absorb the physiologically active hormone.

According to the patent, ortho- and para-toluene sulfonamides are added to pregnancy urine in alkaline solution. The urine is then brought to a pH of 2-5 by the addition of a mineral acid. This precipitates the sulfonamides which carry the absorbed hormone down with them. Acetone dissolves the sulfonamides, leaving the anterior pituitary-like substance as an undissolved residue.

Use of Diethyl Carbonate Is Up In Many Fields

U.S.I. To Boost Production To Meet Increasing Demands

Used in special-purpose lacquers and as a raw material for a wide variety of chemical syntheses, diethyl carbonate is now in great demand in many industries. Requirements for this versatile chemical, which have increased steadily since the end of the war, have made it necessary for U.S.I., the only commercial manufacturer of diethyl carbonate in this country, to step up production, and to put plans into operation for expanding its manufacturing facilities.

Has Many Applications

Originally used for lacquers which require a pure neutral solvent—lacquer for radio tube cathodes is an example—diethyl carbonate is now employed in many diverse types of organic syntheses. These range from the manufacture of comparatively little-known com-

Radio tube cathodes are impregnated with lacquer to prevent bad reception caused by current leakage. The lacquer requires a neutral solvent. Diethyl carbonate—as nearly a neutral solvent as it is possible to make—is ideal for this purpose.

pounds such as ammeline (2-hydroxy-4, 6-diamino-1,3,5-triazine), to the preparation of pharmaceutically-important barbiturates.

Diethyl carbonate may be employed in Claisen condensations to react with esters of aliphatic acids, with esters of aryl substituted aliphatic acids, and with ketones and cyanide derivatives. It may also be reacted with a Grignard reagent to give the next higher acid, and with primary and secondary amines to give the corresponding substituted ureas. Among the other products produced with the aid of diethyl carbonate are: sodium ethyl carbonate, urethan, urea, and carbohydrazide.

Neutral Solvent

Diethyl carbonate is considered as nearly

(Continued on next page)

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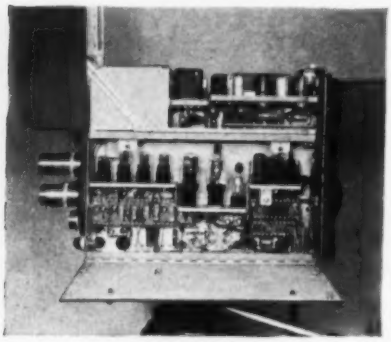
September ★ **U.S.I. CHEMICAL NEWS** ★ 1946

Diethyl Carbonate

(Continued from preceding page)

a neutral solvent as it is possible to make. It is a medium evaporating solvent, characterized by the desirable features of mild odor and high stability. It is useful wherever a pure neutral lacquer solvent is required.



This new television camera is claimed to be as sensitive as the human eye. To prevent current leakage, cathodes in the tubes are impregnated with a lacquer containing diethyl carbonate. *RCA photo*

Starch Broken Down By Improved Method

The use of thymol as a precipitant is the essential feature of a new method for separating the amylose and amylopectin components of starch, according to a technical article published recently. This method is claimed to avoid the difficulties found in the older methods of breaking down starch.

The authors state that a sufficient quantity of sodium chloride must be added to the starch solution before the powdered thymol is stirred into the liquid. Upon standing, the thymolamylose complex precipitates. It is then washed with absolute ethyl alcohol and dried in a vacuum.

The amylopectin component is obtained by concentrating the mother liquor and treating with methyl alcohol. The precipitate is washed and dried with ethyl alcohol and ether.

Makes Lustrous Filaments From Polyvinyl Alcohol

A British patent issued recently describes a method for the manufacture of lustrous artificial filaments and threads from polyvinyl alcohol. These products may have wide applications in the textile industry.

According to the patent, the polyvinyl alcohol is first dissolved in water to give a non-gelatinous solution having a viscosity of about 3 poises at 25 degrees C. The solution is then ejected through a multi-hole jet into a coagulation bath, consisting of 94 per cent alcohol and 6 per cent water. By this means a thread is formed. The thread is then treated in a second bath and dried.

New Catalyst Ups Yield In Friedel-Crafts Reaction

A process yielding maximum amounts of ethyl benzene by the utilization of an improved catalyst in the standard reaction involving ethylene and benzene is described by a Louisiana inventor. According to his patent, the reaction is conducted in the presence of the usual Friedel-Crafts type catalyst, such as aluminum chloride, plus a suitable non-metallic halide. Among the halides used are ethyl chloride, hydrogen chloride, carbon tetrachloride, and chloroform. Yield increases up to 47.5 per cent have been reported.

Blood Is Source Of New Medical Plastics

A new-type protein plastic can be manufactured from blood plasma, according to the claims made in a patent issued recently. This plastic is said to be suitable for a wide variety of medical and surgical uses, since it tends to be absorbed by the animal body.

In the manufacture of the protein plastic, as described by the inventors, fibrinogen is first precipitated from the plasma by cooking to about zero degrees C. and adding ethyl alcohol. The fibrinogen is then mixed with varying amounts of other proteins such as albumin or globulin. A plasticizer, such as ethylene glycol, is added. The result is a pasty mass which can be molded under pressure and cured by heat.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

An ultra-fast cold-setting glue is alleged to be the only type of resin glue that can be handled and machined after 20 to 30 minutes clamping, instead of the usual 6 to 8 hours. **(No. 104)**

USI

A time-saving stain filler, described as a stain that incorporates a wood filler, is said to dry in one hour. It is available in several standard wood colors, the manufacturer states. **(No. 105)**

USI

To convert fractions of an inch into decimals or millimeters is the function of a new instrument, described as a plastic disc 5¾ inches in diameter. It is claimed to be non-warping and easy to use. **(No. 106)**

USI

To water-, mildew-, and flame-proof any fabric, a new chemical is announced which the manufacturer claims can be applied by dip, spray, or brush, and which will not affect the color of the fabric. **(No. 107)**

USI

To apply DDT to hard-to-reach spots, such as tile cracks and bath tub rims, a DDT crayon is offered which is stated to leave a streak of DDT which instantly eliminates insects without harming dogs or cats. **(No. 108)**

USI

A new descaling agent, containing additional rust-inhibiting and cleaning agents, is particularly recommended by the manufacturer for eliminating hard-to-remove oxides. **(No. 109)**

USI

A new filter medium, described as a corrosion-resistant, strong, ductile, porous stainless steel, is said to be applicable to all types of existing filters. The manufacturer suggests its use with a wide variety of acids, alkalies, and salts. **(No. 110)**

USI

Temperature-indicating crayons, claimed to make a chalklike mark below their indicating temperature but to melt and glisten when it is reached, are now available. Temperatures as high as 1600 degrees F. may be measured with the crayon grades available, according to the manufacturer. **(No. 111)**

USI

A versatile detergent is claimed to be useful as a textile washing agent, a waterproofer for fabrics, an emulsifying agent, and a thickener for cotton printing solutions, cosmetics, food stuffs, and ice cream. **(No. 112)**

USI

A new carnauba substitute makes possible self-polishing floor waxes that give higher gloss and better wearing qualities than carnauba, according to the manufacturer. **(No. 113)**

USI

Two new natural riboflavin feed ingredients, said to be obtained from vegetative fermentation operations, are reported to contain vitamins of the B complex. **(No. 114)**

USI

A new degreasing agent, said to be harmless to paint, lacquer, and metal, is claimed to leave a film that protects the material from finger prints. **(No. 115)**

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60 EAST 42ND ST., NEW YORK 17, N. Y. U.S.I. BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96% Absolute
*Super Pyro Anti-freeze
*Solox proprietary Solvent

***ANSOLS**
Ansol M
Ansol PR

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Alpha-acetylbutyrolactone
5-Chloro-2-pentanone
5-Diethylamino-2-pentanone
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Alpha-Oxalpropionate
Ethyl Sodium Oxalacetate
Methyl Cyclopropyl Ketone

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES
*Curbay B-G
*Curbay Special Liquid
*Vacatone 40 • Riboflavin Concentrates

ACETONE
Chemically Pure

RESINS
Ester Gums—all types
Congo Gums—raw, fused & esterified
*Aroplaz—alkyds and allied materials
*Arotene—pure phenolics
*Arochem—modified types
Natural Resins—all standard grades

OTHER PRODUCTS
Collodions
Ethylene
Ethylene Glycol
Urethan
Nitrocellulose Solutions
dl-Methionine

*Registered Trade Mark

Printed in U.S.A.

Machinery Institute to Meet

The Machinery Manufacturers' Institute will hold its fourteenth annual meeting Sept. 29-Oct. 1 at Shawnee Country Club, Shawnee-on-Delaware, Pa., according to president Frank B. Fairbanks, of the Horix Mfg., Co., Pittsburg, Pa.

George W. von Hofe, president of the New Jersey Machine Corp., Hoboken, N. J., is in charge of program and arrangements, assisted by John P. Corley, Miller Wrapping and Sealing Machine Co., Chicago.

Torigian in New Plant

Torigian Laboratories, Inc., is now located in its newly erected research

DR. TORIGIAN

and ampul manufacturing laboratory at Queens Village, N. Y. The new laboratories are utilized to facilitate the expansion program of Torigian Labs. The design of this new laboratory makes it one of the most modern in the industry. The administrative and manufacturing divisions are so arranged that the utmost in sanitary and efficient operations are assured.

Lederle Labs.

Lederle Laboratories, Inc., Pearl River, N. Y., announced that effective September 1, their business will be consolidated with that of the parent organization and will hereafter operate as Lederle Laboratories Division, American Cyanamid Co.

The announcement occurs during the 40th anniversary of Lederle Laboratories, which in that period, has grown from a small "house and barn" plant, to one of the world's largest biological and pharmaceutical producers.

Dr. Ernest J. Lederle, former New York City, Health Commissioner and Dr. William H. Park, director of The N. Y. C. Research Labs., developed their diphtheria antitoxin and an increasing demand for the product prompted them to get set up a production unit in 1906 to manufacture it in quantity. The project rapidly outgrew its original quarters at 19 W. 42 St., necessitating the acquisition of a tract of land suitable for the maintenance of a large number of horses, from which the antitoxin was derived. The present site of the laboratories at Pearl River was selected and the Lederle Antitoxin Labs., were incorporated.

The ensuing years saw a tremendous expansion in production of many products, veterinary, ethical pharmaceutical and biological for human and animal consumption.

With the outbreak of World War II, Lederle was called upon to meet many demands for biological and pharmaceutical products, and for their outstanding work, received the Army-Navy "E" award with two stars.

Today the Stamford Research Labs., at Stamford, Conn., the Calco Chemical division, at Boundbrook, N. J., and Lederle Labs., division at Pearl River, operate as a research team of the American Cyanamid Co.

The modern research and manufacturing division of Torigian Laboratories Inc., at Queens Village, N. Y.

Tek Corp. New Johnson & Johnson Subsidiary

Tek Corp., makers and distributors of Tek tooth brushes and allied products, is announced as a new subsidiary of Johnson & Johnson. Conforming to the "decentralization for greater efficiency" policy of Gen. Robert Wood Johnson, chairman of the board of Johnson & Johnson.

In direct charge of Tek Corp., is John F. Bales, executive vice-president and general manager. Mr. Bayles has been director of the Tek tooth brush activities at Johnson & Johnson during the

JOHN F. BALES

past several years. He was formerly an executive of the Pro-phy-lactic Brush Co.

James J. Flood who was appointed vice-president in charge of sales has had wide experience in national sales management. During the war he served as special assistant to the chairman of the Smaller War Plants Corp.

Miller Appointed Director of WAA

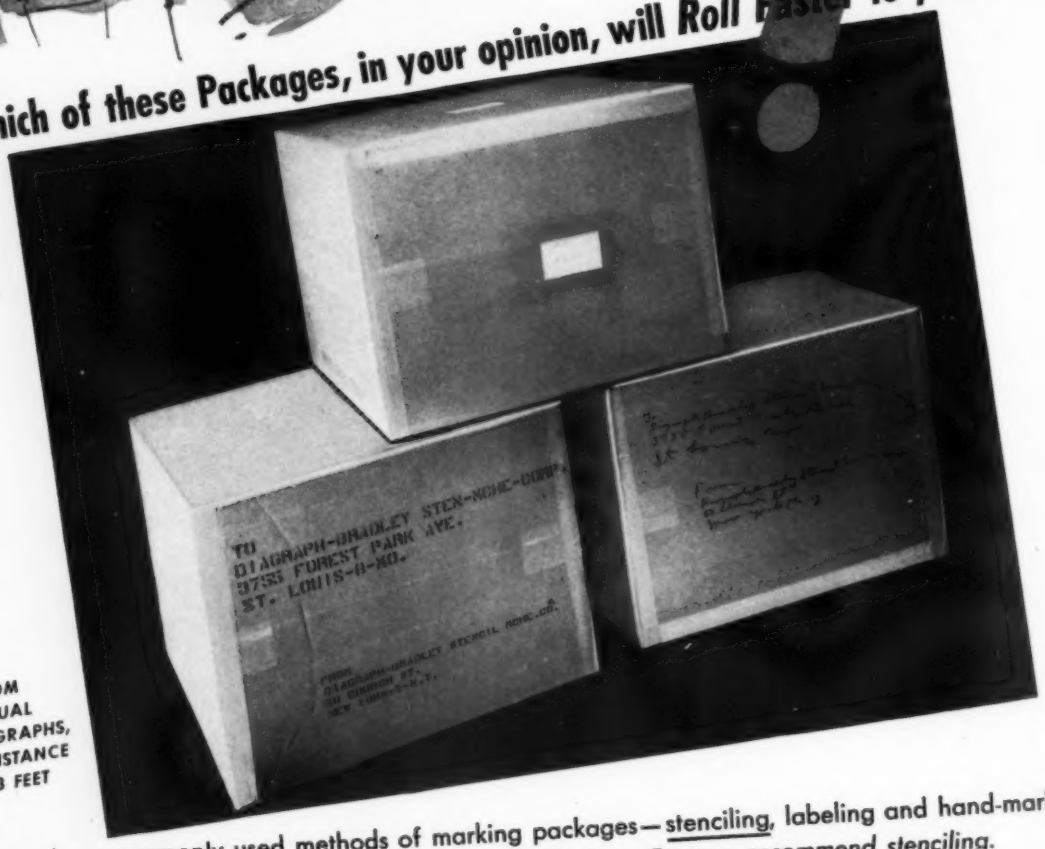
Louis P. Miller has been appointed as acting director of the Drugs and Medical Sales division of the War Assets Administration.

Mr. Miller has served with the WAA since last April and formerly was assigned to policy matters. He has had 35 years experience in the manufacturing, wholesale and retail drug business. Prior to joining the WAA, he was president of Emdee Laboratories, a division of the American Home Products Co., New York, and before that president of Miller Drug Co., Cleveland.

Heyden Chem. Opens Sales Office

The Heyden Chemical Corp., has opened a sales and business office at 1700 Walnut St., Philadelphia, Pa.

Which of these Packages, in your opinion, will Roll Faster to your customer?



FROM ACTUAL PHOTOGRAPHS, AT A DISTANCE OF 3 FEET

These are three commonly used methods of marking packages—stenciling, labeling and hand-marking—common carriers, such as the railroads, truckers and Railway Express, recommend stenciling.

Why take a chance—rain and damp weather obliterate type or hand written labels—avoid hand addressed mistakes—illegibility—labels coming off—lost shipments—delayed shipments.

Stencil address your shipments to keep your packages out of the carriers' Lost Shipment Warehouse.

Stenciled Shipments Roll Faster

THE WORLD'S OLDEST AND LARGEST MANUFACTURER OF STENCIL CUTTING MACHINES

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DIAGRAPH-BRADLEY
STENCIL MACHINE CORPORATION
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DISTRIBUTORS IN PRINCIPAL CITIES—SEE CLASSIFIED SECTION—TELEPHONE DIRECTORY—STENCIL CUTTING MACHINES

OVER 100 D-B ITEMS FOR THE SHIPPING ROOM

Vitamin A, Syrup, and Alcohol Plant

John L. DuBois of El Cemtro, Cal., is head of a group, which plans to purchase twenty acres in the Imperial Valley of California as the site for construction of a syrup and alcohol plant. The factory will contain units for converting oil-bearing plants, grains and alfalfa into Vitamin A, fertilizer, alcohol syrup and other products. The project is expected to cost approximately $232,000.

Volckening Returns from Europe

Lloyd I. Volckening, president of the Ivers-Lee Co., Newark, N. J., has just returned from a flying trip to Europe where he travelled extensively by air. During his stay in Europe he visited factories in England, France, Sweden and Switzerland and made stops in Denmark and Holland.

The purpose of the trip was consummated in the formation of Ivers-Lee Great Britain Ltd., jointly owned by British interests and the Ivers-Lee Company of America. The new organization will be under the direction of John MacKenzie of 49 Park Lane, London, W.1, England.

Lindemann to Europe

Joseph Lindemann, president of L. T. Piver Distributing Co., and his wife are making an extensive European trip to investigate cosmetic manufacturing and marketing conditions with the aim of renewing manufacturing arrangements for the various cosmetic lines in which Mr. Lindemann is interested.

Mr. Lindemann is spending some time in Paris to complete arrangements for shipments of essential oils and to oversee new packaging ideas for the Piver line which will soon be launched in this country with new packaging and scents.

Shafer Advanced by Bayer

Appointment of Judson B. Shafer as assistant sales manager of the Bayer Co. division, Sterling Drug Inc., has been announced by Stanley I. Clark, vice president and general sales manager.

Mr. Shafer has been associated with Sterling since May 1941. Prior to the war he was connected chiefly with the Bayer foreign department. He returned to Bayer on January of this year after serving three years as Lieutenant in the Navy.

Package Machinery Changes

Tom Miller, vice president in charge of sales for the Package Machinery Co., has named Bob Strehlau of the Cleveland office to replace Fred Taylor who has resigned as manager of the Cleveland office. At the same time Joe Kelly of the New York office will be transferred to Springfield where he will handle sales in the New England territory.

Production facilities of the Para Ti Corporation have been more than doubled with the acquisition of the entire top floor of a seven story building in Long Island City. The "Penthouse" will do compounding and packaging for the company.

Grove Laboratories Chairman

James H. Grove, has been elected chairman of the board and president of Grove Laboratories, Inc., St. Louis.

Grandson of the founder, Mr. Grove will continue the policies on which the business was built. Mr. Grove first joined the company directly after graduating from the Massachusetts Institute of Technology, starting in the sales organization of the company he rose to the position of vice president, he left that position to enter the Navy in which he served four years. He received his honorable discharge with the rank of Lt. Commander.

Julius A. Berninghaus

Julius A. Berninghaus general manager of the organic chemicals division of the Monsanto Chemical Co., St. Louis, until his retirement in 1943, died August 15, from a recurrence of a heart attack. He was sixty-eight years old.

Mr. Berninghaus was a native of St. Louis. He was educated there in public and polytechnic schools and at the Benton College of Law. His business life began in 1893 as a clerk in the Mechanics American National Bank. He remained in banking until 1918, the last nine years as a vice-president of the Central National Bank. During the next seven years he was vice-president of the Indiahoma Refining Co. His connection with the Monsanto Chemical Co., began in 1926, as manager of sales in the acids and heavy chemicals department. Three years later he was made general manager of sales.

William M. Allison

William Manwaring Allison, head of the company bearing his name at 162 Water St., New York, wholesale drug and spice dealers, died in his summer home, 29 South Clinton Ave., Bay Shore, L.I. His age was 77.

Mr. Allison, a decendent of Henry Wolcott, who immigrated to New England in 1628, and Oliver Wolcott of Connecticut, a signor of the Declaration of Independence, was born in New York.

Entering the mercantile trade at the age of 16 with the firm of Coombs, Crosby & Eddy, which later became the American Trading Co., Mr. Allison founded his own firm in 1895, and had headed it continuously since.

Mr. Allison leaves a widow, the former Alice Crosby; a son, two daughters and a sister.

Stokes FREEZE-DRYING *Equipment*

FOR UNLIMITED PRESERVATION, WITHOUT REFRIGERATION, OF

- **VIRUSES**
- **PENICILLIN**
- **STREPTOMYCIN**
- **VITAMINS**
- **SERUMS**
- **AMINO ACIDS**
- **OTHER BIOLOGICALS, CHEMICALS, PHARMACEUTICALS, AND CHEMOTHERAPEUTICS**

Stokes freeze-drying equipment for desiccation from the frozen state helped make possible the development of the Blood Plasma and Penicillin programs. It is in equally successful use for preserving serums and other labile biologicals by Drying by Sublimation* under high vacuum.

Along with the University of Pennsylvania and Sharp and Dohme, Stokes pioneered in developing both the method and the equipment to make freeze-drying commercially practical. Today more than 275 Stokes units are in use in laboratories, hospitals, universities, government health services and commercial plants in many parts of the world.

Stokes engineers and manufactures complete equipment for the process, from test tube to plant-scale capacity. Facilities and authoritative assistance are available for research, development and application of this process. A complete pilot plant in the Stokes Laboratory is used for tests and demonstrations. Our technical staff invites your consultation.

F. J. STOKES MACHINE CO.
5932 Tabor Road **Philadelphia 20, Pa.**

* Journal of Immunology, Vol. 50. No. 1, 1945.

F.J.Stokes *High Vacuum*
PUMPS · GAUGES · EQUIPMENT

FJS Est 1895

Production Forum

By Francis Chilson
Industrial Consultant

Labor Relations Program

I have been asked to amplify some of the statements I made in a recent article on the subject of labor relations in the DRUG AND COSMETIC INDUSTRY. This is a stable industry in good times and bad, and there is no reason to suppose that the program briefly outlined in previous discussions, and here amplified, would impose a serious hardship on any established manufacturer. Basically, any foresighted labor relations program must beat the unions at their own game and provide intelligent cooperative leadership for labor. When I say "unions" I do not mean to imply that I am opposed to those unions which are intelligently managed in the interests of their memberships, and which make a practice of cooperating fairly with management for the benefit of all. I mean "unionism" which, as it is very commonly practiced, is a synonym for racketeering which does not benefit labor, and which is extremely harmful to business and the public as a whole.

The program outlined below would apply to every organization having ten or more employees. It should apply to retail and wholesale, as well as manufacturing organizations.

The industry should continue to pay wage rates at least as high as the community average. The wages and salaries of all persons earning $4,000.00 a year, or less, should be guaranteed on an annual basis, but the guarantee should apply only to persons who have been in the company's employ for three or more years, and the amount guaranteed should be at least 80% of the worker's annual wage.

As a matter of practice, the drug and cosmetic industry, particularly the drug branch of the trade, has in effect a guaranteed annual wage because business generally has been so good during the past 25 years, that lay-offs due to seasonal requirements or to business recessions are virtually unknown. However, even though the worker recognizes that his firm is stable, the fear of unemployment cannot be eliminated unless each employer makes a public pronouncement of his intention to guarantee the wages of his rank and file employees. *"Fear of unemployment must be eliminated."*

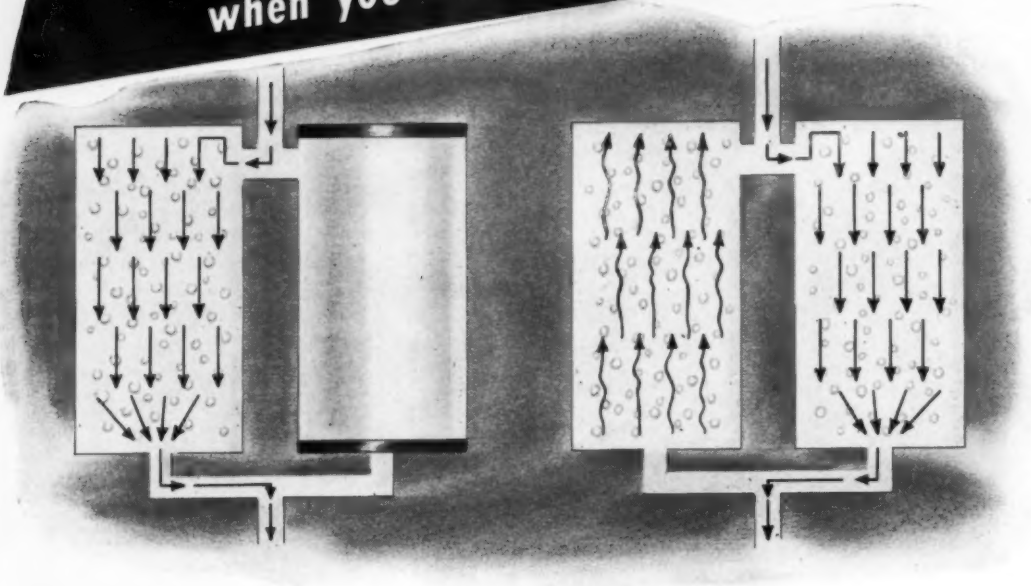
The second element of a sound labor relations program should eliminate the fear of illness. For all employees earning $4,000.00 a year or less, and who have been in the employ of any company for three or more years, provision should be made to pay all health maintenance bills, including dental bills, which amount to more than $25.00. Complete medical care should be extended to the families of married workers, and to the families of single persons who are maintaining dependents.

It really is surprising to observe how many firms in the trade already are carrying out a similar program. I know of one which pays all medical and dental bills for single and married workers, regardless of how long they have been in the company's employ. But here again, the policy of the company loses force unless it is announced.

In addition to providing complete medical care, every company should insure its workers against accident, and should also provide for those workers who have dependent children, life insurance in amount sufficient to maintain the worker's family in the event of death before his dependents have reached an age at which they can maintain themselves. Group insurance generally is provided throughout the trade for workers, but in most cases that I have observed, the worker is forced to pay part of the premium. I should think that all such premiums should be borne by the employer for workers earning $4,000.00 a year or less. Workers earning more than this amount can afford to make a contribution.

Scholarships should be provided for qualified employees and for dependent members of their families who, in competitive examinations exhibit unusual intelligence, and who manifest a desire to join the company upon the completion of their education. I know this sounds very idealistic, but actually, it is being done in a hit-or-miss fashion by many firms. As a matter of fact, every company in the industry really pays a lot

You employ untiring twins when you install this Lectrodryer



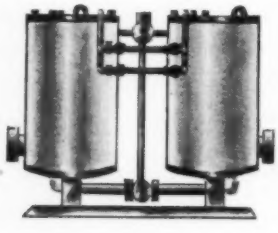
The first column does a DRYing job.

The second column now takes over, while the first has its DRYing ability restored.

This Lectrodryer is actually twins . . . one half of the machine does a DRYing job, while the other half is being rejuvenated. These sketches explain its performance—

Both columns of the Lectrodryer are identical, each containing a full charge of Activated Alumina as its DRYing agent. A selector valve leads the air, gas or organic liquid into one column, where it is dried.

After a time, dependent upon the moisture content of the material being handled, the alumina has picked up a healthy charge of moisture. The selector valve is reversed and the other column takes over the DRYing job. Heat is turned into the first column, thereby driving off the moisture it had picked up.



And so the cycle goes, unimpaired by this constant repetition. Where can you employ this DRYing ability of Lectrodryers? Our engineers will help you find out. Write Pittsburgh Lectrodryer Corporation, 309 32nd Street, Pittsburgh 30, Pennsylvania.

In England: Birlec, Limited, Tyburn Road, Erdington, Birmingham.
In Australia: Birlec, Limited, 51 Parramatta Road, Globe, Sydney.

LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

PITTSBURGH

LECTRODRYER

Reg. U.S. Pat. Off.

CORPORATION

for education. A boy leaving pharmacy school, particularly, is usually not worth his salt for at least two years. Recent graduates generally are poorly equipped for industrial work because the courses they have had to take are much too broad and unspecific, and in the case of pharmacy, the courses emphasize retailing. It would seem more intelligent of manufacturers generally to have a more positive hand in planning the education of prospective employees. I am fully aware an educational program would have to be worked out with a great deal of thought. But, I am equally aware that many boys in college today are being supported by firms in this trade. There are many instances where bachelors in engineering and chemistry have been sent to take advanced degrees at company expense because they exhibited unusual talent. I know at least six men in the trade who are holding down jobs for which they easily could get more money, but who simply will not seek more lucrative employment because their present companies financed their education.

Some times this financing takes the form of part time employment by which a boy can accommodate his working time to his educational requirements and who can support himself while studying.

However it is done, the selection and development of talent is not only economically practical and profitable, but from a common sense point of view, such a program is a major responsibility of management. Management should keep itself invigorated by frequent infusions of fresh new blood; only thus can it perpetuate itself and protect the interests of stockholders and employees alike.

Sick leave pay and vacations should, of course, be included in any intelligent labor relations program. This seems almost axiomatic but there are many firms in the trade providing neither. Several firms, however, have gone farther than most with respect to vacations. One firm provides two weeks vacation with pay for all employees who have been with the firm for three years or more. Those who have been with the firm for twenty years are given an extra week, and those who have been with the firm for thirty years are given two weeks extra, or four weeks in all. Percentage wise, only a few employees ever remain with any firm for thirty years, but the fact that the firm is willing to give a thirty year employee four weeks off with pay, has an extremely stimulating effect on morale in general. The average employee likes to feel that some day, he too, may have a chance to get a four week vacation with pay.

Clean rest rooms and toilet facilities and rest periods are an obvious requirement, but for the sake of an honest record it must be admitted some of the toilets in this industry are filthy to a shameful degree. Locker rooms are often crowded, poorly ventilated and dirty.

As to whether nutritious food should be provided depends, of course, upon the size of the company, whether the number of employees warrant the expenditure, provision of first class cafeteria food is a profoundly wise expenditure.

Frequent company parties are highly desirable as they tend to break the barrier between employees and management. If management generally was more aware of the keen anticipation with which the employees look forward to a dance or picnic, and with what gusto they discuss it afterwards, they would realize what wonderful things parties are for promoting morale. Some companies—the larger ones—can afford to maintain recreation facilities both in and outdoor. Such facilities may include a dance floor, music, games, and many other items.

Adequate information should be provided for employees at all times concerning company policies, products, sales, etc. Many companies do have an employees' bulletin of some sort. Usually these bulletins are confined to company news and social notes. They are not used for propaganda. Some companies will go to great lengths to keep their employees from discovering what their sales and profits are. I know of one company which is listed on the big board, and which appears to be mortally afraid that its own employees will discover how much the company is making. The irony of it is that several of the rank and file employees are stockholders and get the annual financial statement of the company, which they then promptly misinterpret.

I think every company, whether it is a publicly owned corporation or not, should tell its employees enough information about the business in general to kill the grape vine, which usually bears false fruit. A financial statement prepared in percentages can be educational and impressive, even though it contains no figures. When an employee hears that the president of his company makes $50,000.00 a year it sounds like a whale of a lot of money and, in comparison with his own earnings, he may feel sourly envious. If he learns, however, that Mr. Big's salary is only one-tenth of one per cent of the company sales, it doesn't sound like much, and the employee is apt to feel that the boss should get a raise. Information is bound to leak out, regardless of how closely guarded it may be. When it is disseminated via the grape vine, it usually is wrong, and generally harmful. Therefore, I think management should make a practice of providing pertinent information for its employees on a regular basis in a form that will allay rumors and prevent misunderstandings.

There are many other little practices, through which the basic labor relations policy of doing-as-you-would-be-done-by can be put into effect. For example, one company I know arranges to have a personal letter from the president delivered to the employee's home on the employee's birthday. Actually, of course, the president neither writes the letters nor signs them, but the effect is there just the same because the employees think he does. Another outfit sends every employee a very nice birthday present.

To summarize: A sound labor relations program will eliminate the fear of unemployment and ill health; it will provide educational inducements; it will disseminate accurate information; and it will provide good working conditions; wages as good or a little better

than community averages and it will provide by some means the realization that management and employees are not two different elements, essentially hostile and antagonistic to each other, but instead are component parts of the same organism.

The Super-Markets

There is considerable hoo-rah in the trade about the demand of the super-markets to be permitted to sell drugs and cosmetics in competition with regular drug outlets. Although this poses a stiff problem in strategy and diplomacy for the sales managers of the trade, it seems inevitable that the super-markets ultimately will win their point, and that just as some drug outlets have been selling groceries, the super-markets will sell drug sundries and other non-food items.

The trend toward what might be called modernized general stores seems irresistible and inevitable. As a matter of fact, if there were more general stores selling food, meats, vegetables, drugs, cosmetics, household supplies, incidental hardware, and the like, shoppers would save a lot of time and annoyance. This was borne in upon me when recently I visited a general store in the country and in a period of fifteen minutes, purchased a miscellaneous lot of food, drugs, cosmetics and hardware. Had I gone to the large nearby village of Chatham, the same shopping list would have required at least three times as long to assemble in the specialized stores. A super-market is in reality, only a modernized, glorified version of the old time country store, which in turn was a department store. That the trend toward centralized retail selling will continue, there can be no doubt. It seems economically inevitable. In the meantime, while the fight is on, I am glad I am not a sales manager trying to balance water on both shoulders.

Efficiency Plus

As a nation, we are fond of boasting of our industrial efficiency. We print with pride to the fact that during the peak war year, 1945, we produced the staggering total of two hundred billion dollars worth of war and peace materials. This greatest of all time production records should be something to be proud of—and most of us are—but is it really? It occurred to me the other day to divide the total amount of goods produced in 1945 by the sixty million people employed. *Production per capita was $3,333.00.* Assuming that the average war time rate of pay was only $1,500.00 (which is probably far too low) the average person produced an amount of goods equal to twice his pay. That's a hell of a record. Even if you assumed that only one-third of the total number of people employed were actually engaged in production, while the rest were utilized in service and clerical activities, three times the average per capita production figure given above would still be nothing to shout about. We have the production knowhow and if we all really buckle down and go to work instead of talking so much about it, we could make that war time production figure look like chicken feed.

The War is Over

At a very rapid rate my best ties are disappearing, also my socks, my best Irish linen handkerchiefs, and even my shoes are vanishing. For a couple of years I could strut my stuff with a flashy necktie and a pocket handkershief that would knock your eye out. I could go to my dresser in the morning knowing that the pair of socks I saw there the day before were still there. I could shave comfortably morning after morning without finding that my razor, or my blades, or both, had suddenly vanished. It is a good thing I have a comfortable diameter, or I suppose my suits would vanish too. No, our house isn't haunted, nor is it regularly invaded by the light-fingered gentry. "Peace has come to our household; my son has returned from the wars.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Flexible Door

A new type of door for factory buildings has been developed by the Candor Engineering Company, Upper-Montclair, New Jersey. This type of door takes the place of the double swinging doors generally used to keep the cold air out from the outside or to prevent draft from one factory area to the other.

Such doors, when made out of wood or steel, suffer considerably by the careless driving of trucks. Due to the inertia of the doors as well as of the trucks the slightest bump will cause crashed panels and heavier bumps will result in ripped out hinges or more serious damage. Building the doors out of steel to make them stronger usually makes the situation worse, because the heavier doors have greater inertia and repairs in steel are more expensive than repairs in wood.

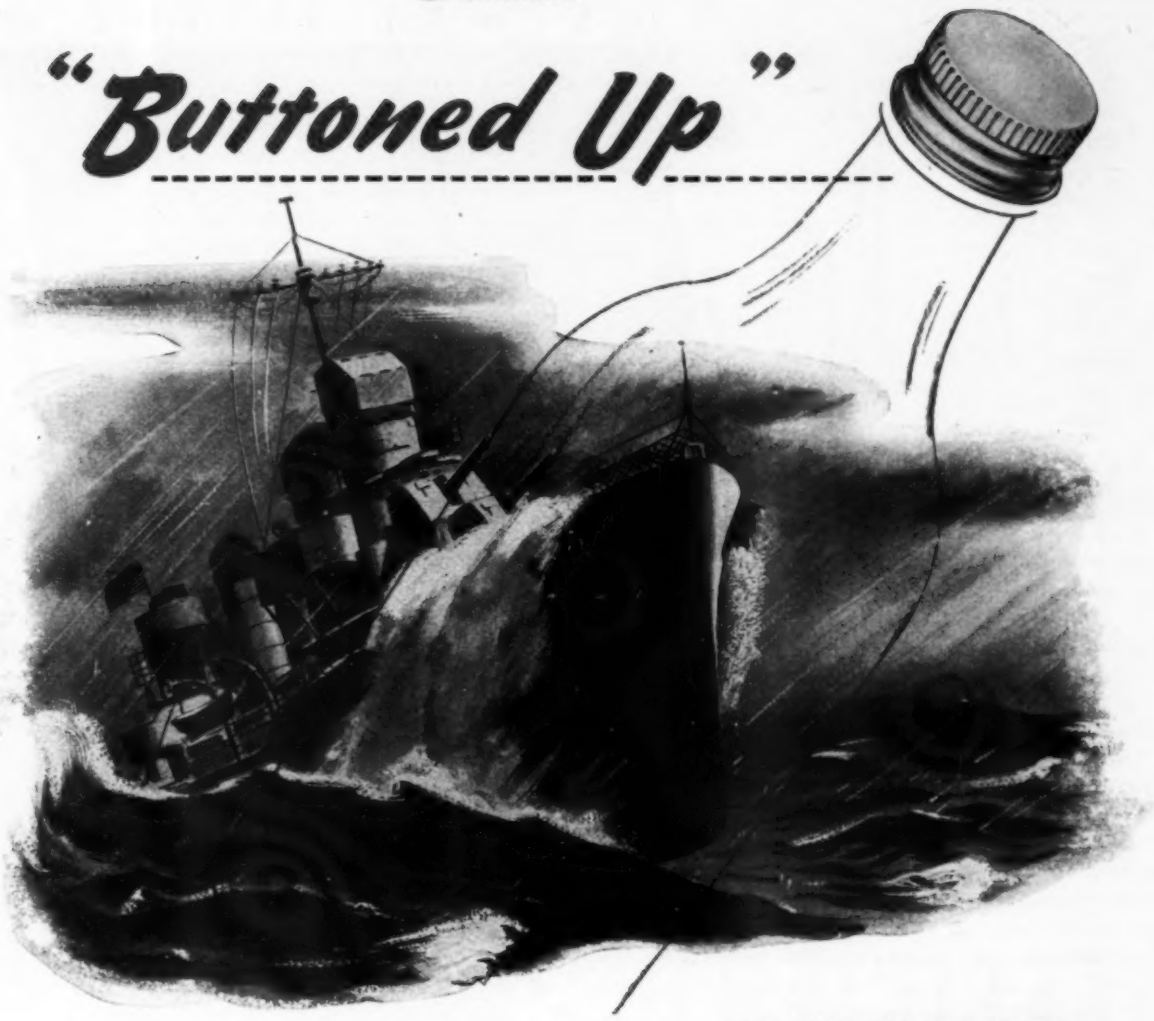
Maintenance engineers are complaining about the high cost of door repairs. In certain locations of factories with a high density of traffic, repairs amount to several hundred dollars yearly for one door.

A certain relief is being obtained by installing door bumpers. Another good solution is the installation of mechanically operated doors, with either push-button or photo-electric control. Such doors, however, are very expensive and their operation is relatively slow.

The "Candor" design takes full advantage of the flexibility of rubber, by using a heavy rubber sheet for the main body of the door. This sheet is suspended in an inverted "L" shaped frame. The frame is hinged in the door opening and it swings in both directions, the same as regular swinging doors. The rubber sheet closes the door opening and it absorbs the shocks received from the trucks. Invariably the doors are built

TEXAS S..... COLLEGE FOR WOMEN
LIBRARY

"Buttoned Up"



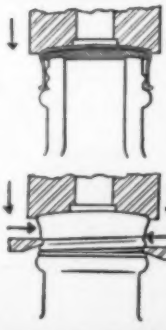
A destroyer is "buttoned-up" during stormy weather at sea, sealed tight against wind and waves. But she's easy to "unbutton" in a hurry when the time comes for action.

Drugs and medicines keep their strength better when they are "buttoned-up" with Alseco R-O's. Bottles and jars are sealed tight against leakage and evaporation, but are easy to open at time of use.

By the unique Alseco method of application, the cap threads are *Rolled-On* while the cap is held tight against the bottle lip. The result is a tight, *tailor-made* seal that stays tight, yet is easy for feminine hands to open.

Our 32 years of sealing experience can be put to work *now* on your sealing problems. Write to ALUMINUM SEAL COMPANY, New Kensington, Pennsylvania.

THIS WORKS BEST WITH ALUMINUM



1. Plain-skirted Alseco Seal is seated squarely on container. Under stationary top pressure, container lip is embedded in cap liner evenly all around, effecting the seal.

2. While the seal is thus held under pressure, threads are Rolled-On to conform exactly with threads on container. Each seal is tailor-made fits perfectly, seals tighter.

ALSECO

SEALS AND SEALING MACHINES

ALUMINUM SEAL COMPANY · NEW KENSINGTON · PENNSYLVANIA

THE ROSS WAY IS THE NEW WAY

EFFICIENT.

An efficient feature of the ROSS machine is the simple raising of the top guide board. This is designed for quick clearing of a faulty carton during actual operation. (The ROSS machine averages one in 1500 in carton spoilage). This ROSS cartoning machine is fully automatic for setting up and tucking one end of folding cartons.

The same features are available on the ROSS fully automatic machine *(loading and tucking both ends of either tuck or sealed carton).*

PRECISION PARTS • SELF OILING • DIAL CONTROL
VERSATILE ADJUSTABILITY • MASTER SPEEDRANGER

PAT. APPLIED FOR

A. H. ROSS and Co.

PACKAGING MACHINERY

SUBSIDIARY OF THE ROCKWELL MANUFACTURING COMPANY

LUDLOW • KENTUCKY

as double doors. Standard sizes are 6′ and 8′ wide. For better vision round windows with safety glass panels are provided. The photograph shows the general appearance of a set of doors of this type installed in an outside opening of a building. It will be noted that a pair of steel doors is installed in the same opening. The steel doors can be kept locked during the night and they are kept open during working hours. In places where heavy drafts may occur, quite often a vestibule is built with a set of "Candor" doors on either side.

The main advantage of "Candor" doors can be summed up as follows:

a. Stronger than wood or steel doors
b. Cheaper than mechanically operated doors
c. Damage-proof because of their fully cushioned action. In this respect it relieves the maintenance man of one of his worst headaches.

"Candor" doors are said to pay for themselves in a few years, write to the Candor Engineering Company, 124 Watchung Avenue, Upper-Montclair, New Jersey.

Liquid Mixer

Operating on a new high-speed principle that introduces components of laminar flow and interface shear, a new high-speed mixer introduced by The Cowles Company of Cayuga, N. Y., has proved under actual field tests to be from 2 to 20 times faster on standard mixing, dissolving and dispersing operations.

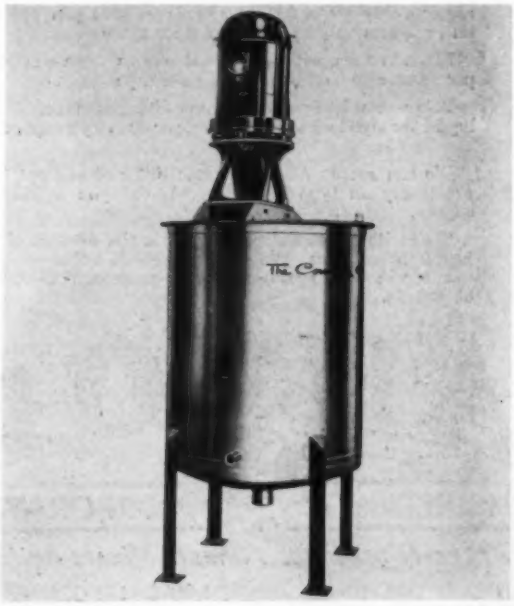
The new machine exposes broad areas of molecular contact between the solvent and solute, subjecting every particle of the material being treated to molecular tension and scrubbing action, thus greatly increasing dissolving and dispersing action. High viscosity actually improves the shearing effect, resulting in faster dissolving or more homogeneous mixture.

Rugged, high-class design coupled with highest quality materials and construction carefully machined to precision limits and fitted with long wear antifriction bearings, assure maximum life with minimum maintenance requirements. In addition to low maintenance cost, Cowles has aimed at great safety, both from the explosion proofing and mechanical safety angles.

Two types are currently in production. One model has the tank permanently incorporated in the unit with capacities of 100 to 500 gallons. The second model has an elevating head, designed for use with user-furnished portable tanks.

The design of the impeller, size of motor and tank material are specified for each job by the Cowles engineering staff.

The new equipment was designed by Mr. Edwin Cowles, who previously developed the Hydrapulper and Classafiners, well known in the pulp and paper industries. Cowles Dissolvers have been under commercial test for the last five years, in the chemical, paint and plastics fields. They should be widely useful in the drug and cosmetic industry for liquids, emulsions, ointments and creams.



ALSOP FILTERS

for positive, trouble-free Filtration

In Stainless Steel, Monel Metal, Bronze, etc.

For more efficient, dependable and economical operation use a filter that's specified for your particular conditions. Alsop has a complete line of "*Sealed-Disc*" Filters to meet every requirement.

You'll find that the Alsop "*Sealed-Disc*" Filter recommended for you provides an enormous filter area and surface in a surprisingly small space. The unequalled asbestos filter discs used in the "*Sealed-Disc*" Filter, available in eight different grades of porosity, guarantees you an ultra-fine, brilliantly polished product.

NOTE THESE FEATURES

Filter discs can be changed easily and quickly. It is just as simple to clean the entire machine for use on different liquids.

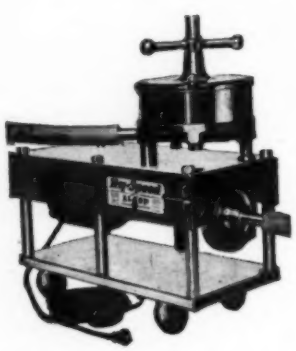
Requires exceptionally small floor space. For example, a 600 gals. per hour filter complete with motor and pump requires only a 9" x 20" floor space—a 2000 gals. per hour unit requires only 12" x 24" of floor space.

Made in sizes, with or without pumps, from one gallon per minute up to thousands of gallons per hour.

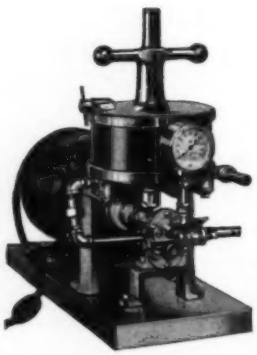
Being completely sealed, these filters eliminate loss of liquid through leakage or dripping or even by evaporation.

We can supply Alsop Asbestos Filter Sheets cut to fit practically all type filters, let us send you a free trial supply.

We invite you to use our services in the solution of your filtration problems. We shall be pleased to let you have our report and recommendation promptly, there's no obligation.



Portable model with Centri-poise electric pump on splash-proof stand. All parts touching liquid made of Stainless Steel, Monel, Bronze, etc.

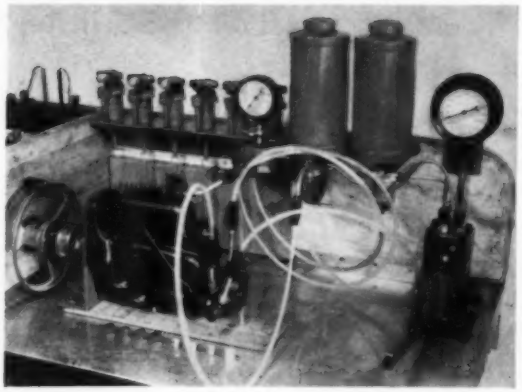


This low priced bench model "*Sealed-Disc*" Filter complete with positive pressure rotary pump is made in sizes from one to six gals. per minute. Filtering areas range from 200 to 1200 sq. inches. Available with or without wheels.

ALSOP ENGINEERING CORPORATION

Filters · Filter Discs & Sheets · Mixers · Agitators

109 CASS STREET MILLDALE, CONNECTICUT



Tubing

The illustration shows a typical installation of Saran plastic tubing used in connection with an engine test block. Both for temporary and permanent installations, this plastic tubing is finding a greatly increased use in a wide variety of applications, replacing and outliving other materials commonly used for the purpose in the past.

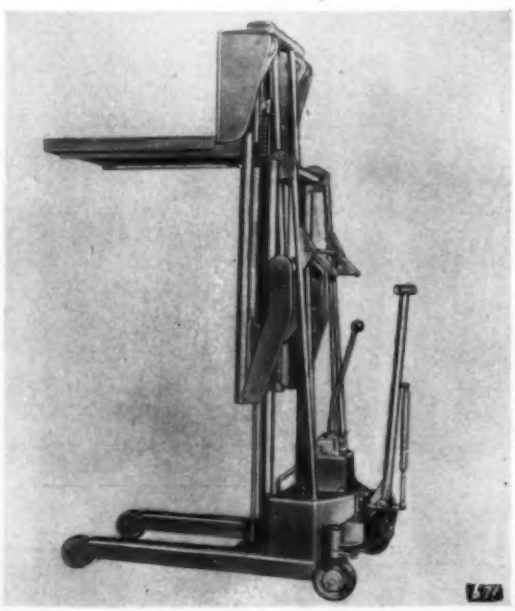
Thoroughly tested under the rigorous conditions of war, this plastic tubing is proving its worth in peacetime applications in many different types of industrial liquid or gas conveying systems. According to the Commercial Plastics Company, one of the largest makers of this type of tubing, it is to be found in installations in laboratories, factory test units, oil refineries, bottling plants, breweries, sugar refineries, chemical and pharmaceutical plants.

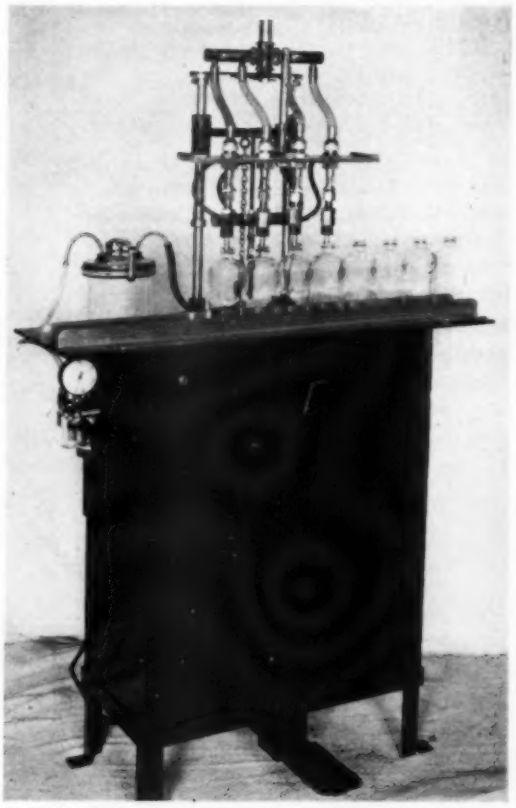
Hydraulic High-Lift Truck

To make their new Hydraulic High-Lift Truck adaptable to higher stacking and tiering jobs, Lyon-Raymond Corp., 2684 Madison St., Greene, N. Y., have designed a telescopic frame which increases the elevated height of the platform to 84 inches. (48 inches is standard elevated height without a telescopic frame). In lowered position the overall height of 69 inches is maintained, allowing the truck to be moved through doorways and under overhead obstructions.

The telescopic section is of the same tubular construction as the base frame, insuring that added weight is kept to a minimum. An auto-type steer, with widespread front wheels, is provided for increased stability.

Although the illustration shows the truck equipped with a hand pump, a motor-driven pump is available and is strongly recommended for any operation involving frequent elevation of the truck platform.





Straight Line Bottle Filling Machine for Gravity, Pressure and Vacuum

Machine comes with special type construction automatic shut-off filling valves which open upon contact with bottle and close upon leaving.

Special valves for heavy and foamy solution. All valves have liquid heighth regulator, quickly adjustable to fill to any desired heighth in bottle.

Negligible amount of overflow due to special type valves.

Easily adjustable to different height bottles. All parts coming in contact with liquid in brass nickel plated and stainless steel and also supply in complete stainless steel parts.

Machine is operated by foot pedal, freeing both hands of operator and insures uniform pressure.

Now glass is even easier to handle

• Glass, helped to its present superiority by Hartford-Empire research and development, is further helped by these two pieces of handling equipment.

• One-trip beers, eight-paneled ketchups, baby foods — these and many other glass containers are handled with ease by the non-jamming H-E Unscrambler and the straight-line H-E Pocket Washer.

THE H-E NON-JAMMING UNSCRAMBLER

THE H-E STRAIGHT-LINE WASHER

THE UNSCRAMBLER

Points of superiority of the H-E Unscrambler include:

1. *Jamming is completely eliminated.* Even the two final jars entering the line cannot jam in the H-E Unscrambler. Continuous supply to filler is assured.

2. *Containers are handled gently, though swiftly.* The oscillating guide, an exclusive H-E feature, keeps the container mass active in slow motion, preventing damaging impacts. Yet over 300 jars are delivered per minute.

THE WASHER

Points of superiority of the H-E Pocket Washer include:

1. *Gentle, straight line washing.* Containers are handled one at a time, thus avoiding bruises—but are delivered at better than 300 per minute, when such speeds are desired.

2. *No attendant required.* This device is completely automatic.

OTHER FEATURES The flexibility, both as to speed and type of operation, of these two pieces of equipment is further described in two illustrated folders, available on request. Both machines are saving money for brewers and food packers today. Ask for the folders and learn why.

ONE REASON WHY GLASS MAKES A BETTER CONTAINER

Hartford-Empire's continuing search for better formulae, better methods and better performance centers in the experimental glass plant and complete laboratories housed at 411 Homestead Avenue, Hartford, Connecticut — just up the street from the main offices and plant.

The H-E record of never being satisfied, of constant "teamwork in brainwork" for better glass containers, now goes forward to help the customers of glass container manufacturers — right now with the Pocket Washer and Unscrambler.

More will come — and it will come with a first hand understanding of packers' and bottlers' problems. From Hartford-Empire's food processing laboratory to its battery of container testing equipment, the research, development and engineering resources of this company work wholly for glass container manufacturers and their customers.

HARTFORD-EMPIRE COMPANY

HARTFORD 1, CONNECTICUT

SEAMLESS

ONE PIECE DIE DRAWN STAINLESS STEEL

6 REASONS WHY YOU SHOULD OWN HUBBERT SEAMLESS KETTLES . .

***METHOD** . . . Hubbert's methods are the best—not the quickest or cheapest, all kettle shells being properly heat-treated and hardened and specially processed to prevent corrosion.

EFFICIENCY . . . Hubbert Kettles are efficient—heat rapidly and evenly—due to proper steam distribution.

SEAMLESS . . . All Hubbert shells are seamless. Die Drawn from one piece of material. No welds to leak or corrode.

SANITARY . . . Hubbert Kettles are completely sanitary and easy to clean and keep clean. No cracks, holes or depressions where dirt may lodge. Hard and durable. Perfectly polished.

SAFETY . . . Hubbert Kettles are heavily constructed to withstand their rated working pressure *Plus*.

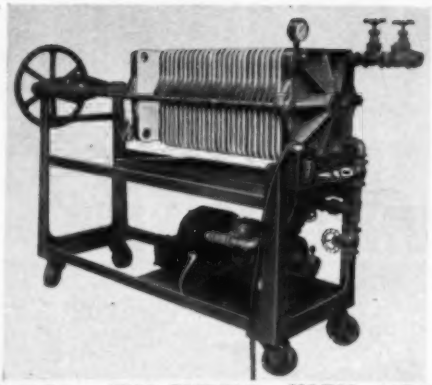
QUALITY . . . Only the finest of materials, engineering and workmanship go into Hubbert Kettles—resulting in low upkeep costs.

HUBBERT

B. H. HUBBERT & SON, Inc.

1311 SOUTH PONCA STREET, BALTIMORE 24, MD.

*THE ONLY ONE OF ITS KIND IN THE WORLD . .



HORM FILTERS HORM ASBESTOS FILTER PADS

Horm Filters for filtration, clarification, polishing, are designed so that no liquid can by-pass the filter element. They are unsurpassed for drug, chemical and cosmetic preparations.

CLARIFLOW

–No rubber washers used
–Adaptable to all types of filter mediums
–Rapid change of filter pads
–Construction Stainless Steel or Bronze (nickel plated)
–Suitable for coarse and fine filtration, including germproof and ultra-fine

HORM ASBESTOS FILTER PADS FOR EFFECTIVE FILTRATION

STERILFLO

TRADE MARKS REG. U.S. PAT. OFF.

F. R. HORMANN & CO., Inc.

186 JORALEMAN ST., BROOKLYN 2, NEW YORK
Plant: 30 Sea Cliff Ave, Glen Cove, L. I.

Here's what you'll like about the new

..."HAGERTY HANDY FILLER"

- Durable
- Moderately priced
- Eliminates spilling
- Simple to operate
- Convenient sizes
- Light construction

The most practical hand filler for creams, lotions and liquids.

Write for illustrated folder and prices

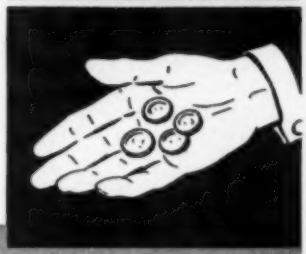
HAGERTY BROS. & CO.

10 Platt Street New York, N. Y.

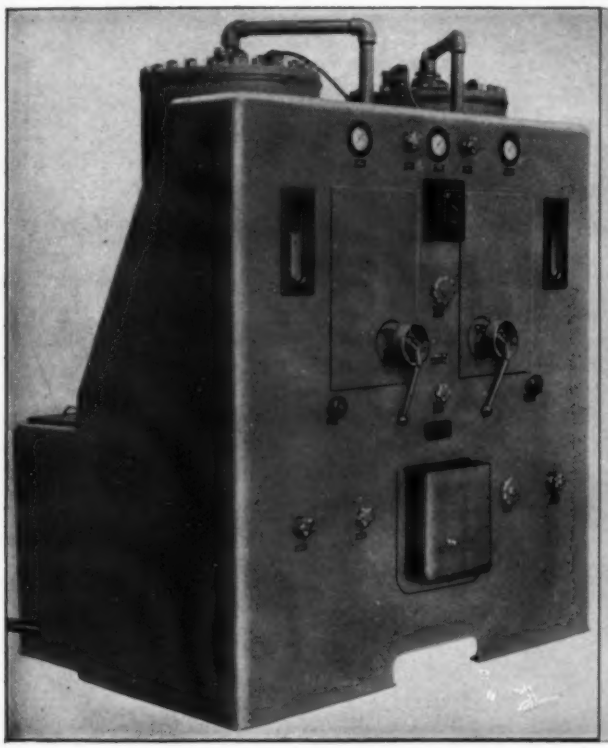
Est. 1849

"We used to spend *this* for WATER...

...NOW we spend *this*..."



(Typical report from D-I System users)



A lot of water users are now getting *specification water* at far less cost than ever before. Many who formerly spent from 65c to $8.00 per 1000 gallons for distilled water are now getting water that meets their exacting requirements at only 2c to 20c per 1000 gallons. They are making these savings whether they use a few gallons of water an hour or millions of gallons per day. They have installed Dorrco De-Ionization Systems.

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Dye Making	Pharmaceuticals
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Removing simple hardness
Decreasing Bicarbonate alkalinity
Reducing total solids
Metal recovery from waste water

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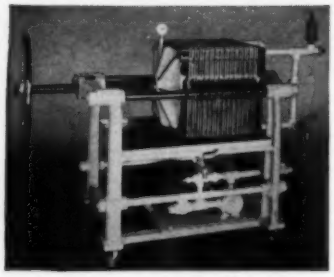

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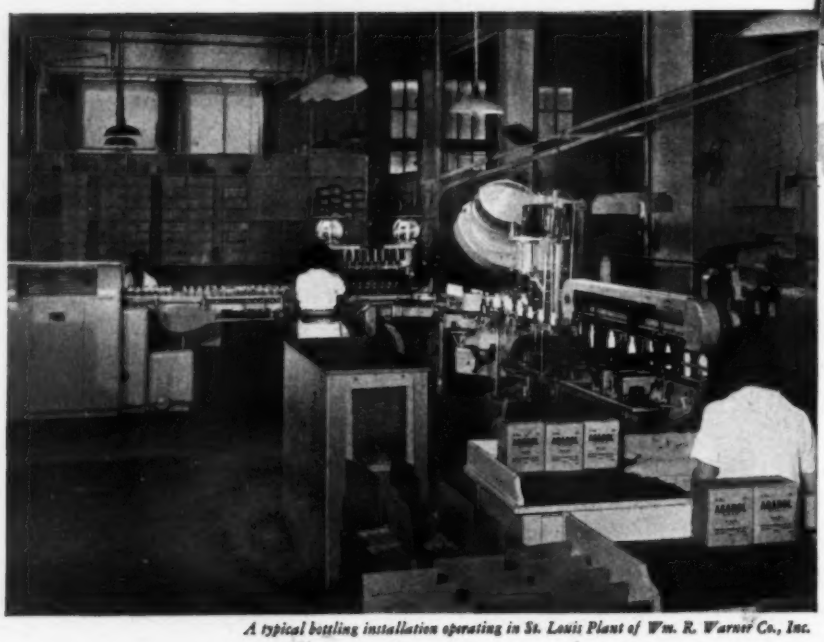

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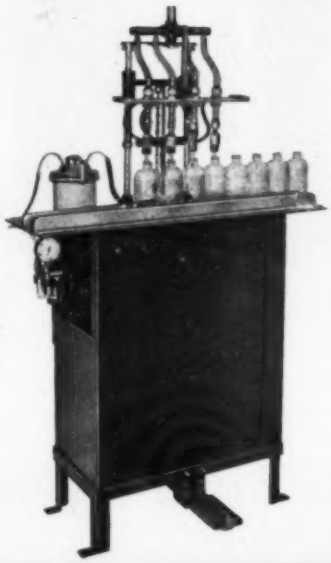

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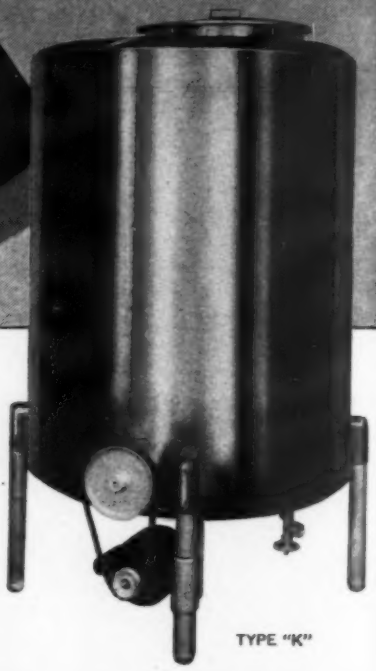

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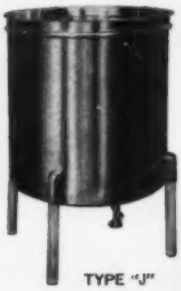

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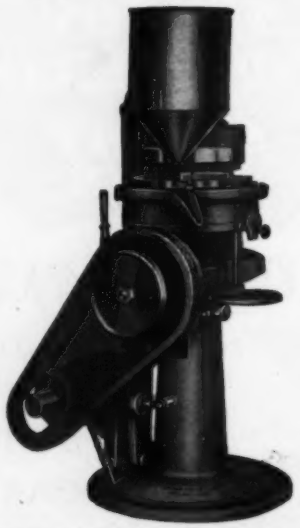

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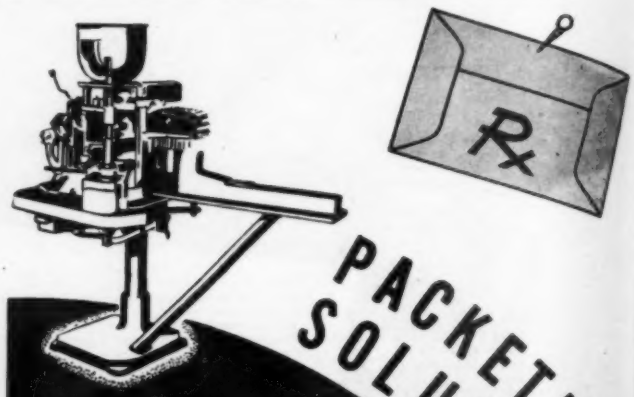

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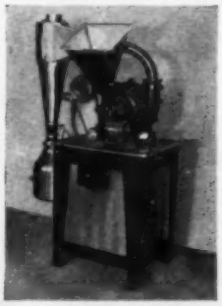

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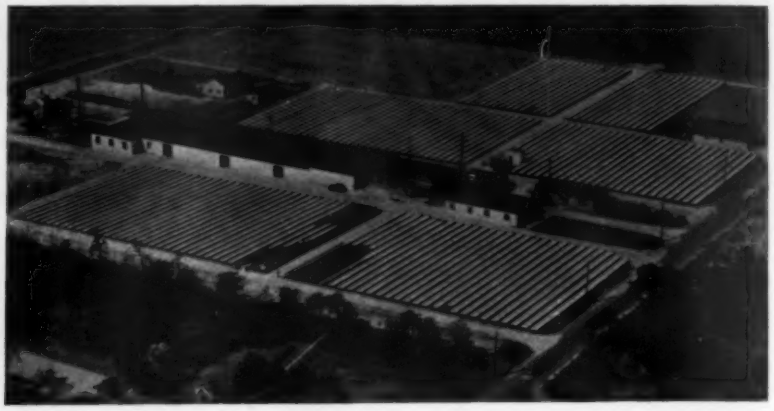

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Industry's Books

Narcotics and Drug Addiction, by Erich Hesse, M.D., 219 pp., Philosophical Library, New York, $3.75.

This book describes the uses and abuses, in the Eastern and Western world, of all the pleasure drugs and stimulants. The author, Professor of Pharmacology and Biology, describes the nature and character of all the pleasure drugs of our time. The common components, the manner and method of manufacture and production, are clearly defined, as well as the various stages of drug addiction, their effects and their cure. Alcohol psychoses, cocaine consumption, opium smoking, exhilerating pepper, morphinism, are just a few of the many topics covered by Professor Hesse. An appendix contains names and subject index, and an extensive bibliography.

National Interest and International Cartels, by Charles R. Whittlesey, Professor of Finance and Economics at the University of Pennsylvania, 172 pp., Macmillan Co., New York, $2.50.

This volume is an interpretive analysis of the cartel problem. The major issues relating to international cartels are here examined and evaluated. The shortcomings in many of the popular conceptions of cartels are indicated, and new grounds are provided for weighing and judging their economic and political significance. The volume also classifies and analyzes the leading proposals for dealing with the cartel problem which have been advanced by government officials, economists, and business men. It formulates the essentials for a satisfactory settlement of the cartel question, and offers concrete suggestions for achieving this end.

Cosmetics and Dermatitis, by Louis Schwartz, M.D., and Samuel M. Peck, M.D., Medical Directors, U. S. Public Health Service, 189 pp., Paul B. Hoeber, Inc., New York, $4.

From antisperspirants to vanishing creams . . . for the first time all cosmetics are examined critically from a dermatological viewpoint. The word cosmetics is here used so broadly—including soaps and dentifrices—that these dermatites concern almost everyone. The history and known effects of the most often used types of beauty and cleansing preparations are systematicallyinvestigated, with conclusions based on the authors' own wide experience and a review of the published literature. Sample formulas of most classes of cosmetics are given: astringents, hand lotions, hair dyes and depilatories, lipsticks, nail polish, suntan preparations, perfumes, etc. These formulas will be of help to the physician in tracking down an allergy or alleviating a known dermatitis. Special practical chapters are devoted to diagnosis and treatment of dermatitis, to patch testing, and beneficial aspects of cosmetics. The distinguished coauthors from the U. S. Public Health Service provide a book that is not only vital in everyday practice, but certain to be an invaluable reference for many years.

Vitamine und Hormone und ihre technische Darstellung (Vitamins and hormones and their technical production) Part I. Ergebnisse der Vitamin—und Hormonforschung (Results of vitamin and hormone investigation) by Dr. H. Bredereck and Dr. R. Mittag, 138 pp.; Part II. Darstellung von Vitaminprapareten (Manufacture of vitamin preparations) by Dr. F. Seitz, 205 pp.; Part III. Darstellung von Hormonpraparaten, ausser Sexualhormonpraparaten (Manufacture of hormone preparations, except sex hormone preparations) by Dr. E. Vincke, 162 pp. Published by Advance Scientific Publishers, Inc., New York.

This series is published as separate, loose-leaf, volumes the fourth volume on the manufacture of sex hormones being not yet available. The arrangement is a very convenient one, each vitamin or hormone being treated in a separate monograph. Part I discusses each vitamin and hormone briefly from the pharmacological and chemical point of view and covers physiological activity, chemical constitution and synthesis. A combined bibliography contains 427 literature references, indicative of the material covered in a relatively short survey.

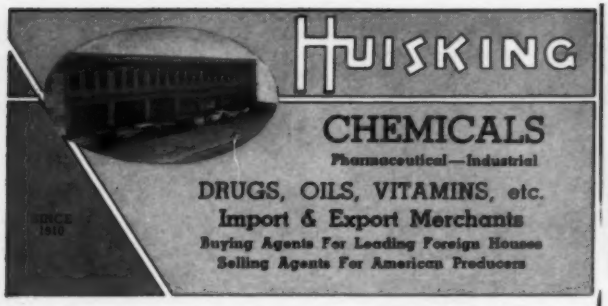
Major divisions of part II cover the fat-soluble vitamins, the water-soluble vitamins, vitamin-containing medicaments and dietetic products, vitamin-fortified food products, vitamin-containing cosmetics, and commercial vitamin preparations. Descriptions of vitamin-containing preparations are pretty well limited to literature abstracts, the section on cosmetics, for example, consisting only of five short patent abstracts. Chemical data for individual vitamins, however, is quite good, with detailed descriptions of preparative methods from natural sources and syntheses. Oddly enough, the treatment of vitamin K is extremely sketchy, in view of the extensive work done in this field in the United States in recent years.

Part III includes detailed data, with good manufacturing details, about insulin, thyroxin, adrenalin, hypophysis, plant hormones, etc. The various hormones included in each general classification are mentioned; biological and chemical details, including preparative methods and analytical data, are covered for more important materials.

The series should serve as a useful reference source to those engaged in chemical work in the field of vitamins and hormones.

German For The Scientist, by Peter F. Wiener, Modern Language Master at Rugby School, 238 pp., Chemical Publishing Co., Brooklyn, $3.50.

This volume is intended to teach the elements of scientific German to those who need this knowledge for employing German publications in their research or development work. Part I gives a brief summary of the grammatical and constructional difficulties, and the elements of scientific German, with useful hints to avoid these difficulties. Part II and III embrace passages in German taken from chemistry and physics literature. All passages contain basic words occuring in scientific German and are interesting not only from the linguistic, but also from the scientific viewpoint. At the end of each extract there is a vocabulary of the most important words occuring in that passage, and there are occasional references to the grammatical introduction. Part IV includes the complete, but not always literal, translation of all German passages of Parts II and III, which enables the student to check his translation efforts.



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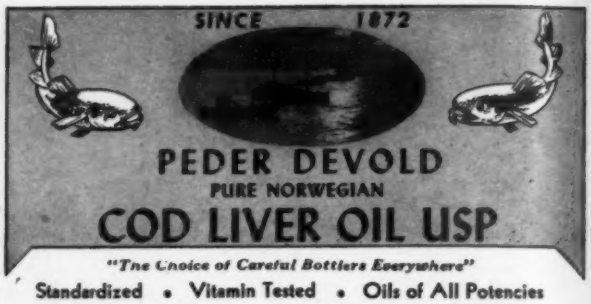

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Anti-bacterial Triethylene Glycol Vapor

In their report of the effect of triethylene glycol vapor in hospital wards, M. Hamburger Jr., V. Hurst, O. H. Robertson and T. T. Puck (*J. Infect. Dis.* 77:177, 1945) point out that early laboratory studies on the bactericidal action of glycol vapors revealed that maximum efficiency is obtained at relative humidities between 40 and 60 per cent. Equally effective killing could be achieved at lower humidities only when higher concentrations of glycol were employed. Later, certain observations in hospital wards suggested that an appreciable bactericidal action may be exerted by triethylene or propylene glycols when the relative humidity is as low as 35 or even 25 per cent. These workers have found that the bactericidal effect of triethylene glycol vapor on air borne hemolytic streptococci in hospital wards at relative humidities of 18 to 32 per cent is substantial, though the reductions are less than those achieved when the humidity is maintained at 40 to 50 per cent. The effect has been noted both on streptococci liberated into the air during bed making and on those present during "quiet periods."

Therapy of Psoriasis

Following observations on 207 cases of psoriasis, I. L. Schonberg (*Ohio State Med. J.* 42:254, 1946) has gotten the impression that the various types of parenteral and enteral medication were of no apparent value in this series of cases. Exacerbations were most prevalent where infiltrated patches remained. Dietary measures were of questionable value. Autohemotherapy seemed to benefit only the acute cases of psoriasis guttata. Genital and intertriginous, nail and scalp lesions were most resistant to therapy. Nail lesions did not respond to any measures. Although there was some evidence of familial tendency in several of the cases, no definite conclusions could be drawn. The best method of therapy is external. A soap suds soak and keratolytic preparations were employed for the first few days of treatment. This was followed by a 5 per cent crude coal tar ointment in conjunction with ultraviolet, as suggested by Goeckerman. Residual lesions were treated with 1 to 3 per cent chrysarobin and ultraviolet therapy. He has found that certain cases of psoriasis will not be influenced by any kind of therapy.

Streptomycin in Tuberculosis

In a summary of clinical and experimental observations on streptomycin, H. C. Hinshaw and W. H. Feldman (*J. Pediatrics* 28:269, 1946) state that the range of efficacy of this agent extends the possibility of antibiotic therapy to the treatment of several diseases which are not amenable to other chemotherapeutic agents. Experimental tuberculosis of guinea pigs may be arrested by prolonged treatment with streptomycin even though the disease has been permitted to become well developed prior to institution of therapy. A total of 54 patients with different types of clinical tuberculosis have been treated with streptomycin. Present evidence clearly indicates that streptomycin does not exert a rapidly curative effect on clinical tuberculosis, although it does appear to modify the course of the disease in a favorable manner and exert a suppressive effect on previously progressive tuberculosis. At the present time it must not be considered to be a substitute for any other form of treatment.

Penicillin Aerosols for Respiratory Infections

Technical difficulties having been overcome, M. S. Segal and C. MacI. Ryder (*New England J. Med.* 233: 747, 1945) have demonstrated that penicillin aerosolization can be very useful and often very effective in the treatment of serious respiratory diseases. It was found that the clinical course of 6 patients with infective bronchial asthma was not altered, although the penicillin-susceptible organisms were eradicated. However, striking clinical cures were promptly obtained in 5 patients with pneumococcal pneumonia and in 1 patient with an acute pulmonary infarction and pneumonitis. Five patients with bronchiectasis were successfully treated, 2 patients before lobectomy and the other 3 entirely medically. Defervescence, lessening of toxicity, diminution in the amount of daily sputum, loss of foul character in the sputum, rapid disappearance of penicillin-susceptible organisms, improvement in appetite and a gain in weight were uniformly observed. Such therapy is believed to be more helpful than sulfonamides or penicillin parenterally. Of 4 patients with lung abscess treated with penicillin aerosols, 1 died following surgery, another was enabled to undergo uneventful lobectomy, while the other 2 were entirely cured.

On the basis of these preliminary observations, it is felt that penicillin aerosolization has a definite value in the treatment of patients with serious respiratory disease. Effective local medication with adequate systemic blood levels for most of the penicillin-susceptible organisms can be obtained.

Toxicity of Large Vitamin D Doses

In a discussion of the toxic effects of large doses of vitamin D as used in the treatment of arthritis, W. D. Paul (*Iowa State Med. Soc. J.* 36:141, 1946) stresses that large quantities of the vitamin may cause severe hypervitaminosis, particularly if combined with a high calcium intake in the form of milk. The dose of vitamin D should be based on body weight, rather than age, and whether or not it is given in milk. The usual toxic symptoms of vitamin D administration are headache, nausea, vomiting, diarrhea, epigastric fullness, polyuria and polydipsia. The signs of toxicity are low specific gravity of the urine, traces of albumin in the urine, inability to concentrate urine, increased serum calcium, renal failure, retention of nonprotein nitrogen, deposition of calcium in soft tissues, deposition of calcium in arteries and arterioles and, eventually, death. Massive doses of vitamin D do not alter the ultimate course of arthritis. Whenever massive doses of vitamin D are prescribed, the urine should be examined frequently and serum calcium levels should be obtained.

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caused by *Shigella flexneri III* is resistant to these anti-bacterial agents. Thus, when an epidemic of dysentery caused by this organism broke out in a fleet unit, C. M. Thompson and B. V. White, Jr. (*U. S. Naval Med. Bull.* 46:901, 1946) had to resort to other methods for therapeutic management. The basis of supportive therapy was the maintenance of protein and electrolyte balance and the insuring of as much rest as possible for the affected bowel.

Diarrhea, abdominal cramps, and tenesmus were treated with bismuth subcarbonate, tincture of opium, and heat to the abdomen. A suspension of bismuth subcarbonate prepared according to the following formula was found to be highly satisfactory:

Corn starch	37.0 Gm.
Simple syrup	370.0 cc.
Bismuth subcarbonate	130.0 Gm.
Essence of peppermint	1.0 cc.
Water to make	1,000.0 cc.

Mix the starch in 50 cc. of cold water to form a smooth paste, heat the syrup and 250 cc. of water to boiling, then quickly add the starch mixture and continue to heat for 15 minutes. Mix the bismuth with 125 cc. of water to form a smooth paste. Strain the mixture of cooked starch through crinoline and add the bismuth mixture. Mix. Add the peppermint and sufficient water to make 1,000 cc.

This preparation was administered orally in doses of 30 cc. every four hours, day and night. Two hours after each dose of bismuth, 0.7 cc. of deodorated tincture of opium was given. In some cases with severe tenesmus, the following mixture of scopolamine and belladonna was effective in relieving spasm:

Scopolamine hydrobromide	0.006 Gm.
Tincture of belladonna	15.000 cc.
Aromatic elixir, to make	120.000 cc.

This preparation was given in a dose of one teaspoonful every 3 hours.

Tyrothricin in Treating Skin Diseases

The usefulness of the antibiotic, tyrothricin in the treatment of skin diseases has been evaluated by A. G. Franks, W. L. Dobes and J. Jones (*Arch. Dermat. and Syphil.* 53:498, 1946) in a series of 47 cases with various cutaneous infections. The tyrothricin obtained was the concentrate which when properly diluted yielded an isotonic solution which contained 0.5 mg. of tyrothricin per cubic centimeter. This was obtained in 20 cc. vials and was diluted to 1,000 cc. with sterile distilled water. This was applied to the affected areas as a wet dressing, so that the lesions were constantly dampened with the tyrothricin solution. To prevent the solution from evaporating rapidly the saturated gauze was well covered with oil cloth. For the ointment applications, each gram of greaseless base containing 0.3 mg. tyrothricin in true solution was used.

As a result of observations on these patients, tyrothricin was found to be effective in impetigo contagiosa, pyoderma and dermatitis repens, but of limited benefit in sycosis vulgaris, ecthyma, acrodermatitis perstans, nummular eczema and secondarily infected eruptions. In the opinion of Franks and his associates, tyrothricin therapy is of little practical value in the treatment of the ordinary diseases of the skin. Only superficial inflammatory eruptions may be adequately treated. Secondarily invaded eruptions may also respond, especially if caused by the staphylococcus or streptococcus.

Sodium Nicotinate for Headache

It is pointed out by J. W. Goldzieher and G. L. Popkia (*J.A.M.A.* 131:103, 1946) that the successful use of oral or parenteral nicotinic acid in the treatment of certain special types of cephalalgia, such as migraine, malarial headache or sinus headache, has been reported within recent years. Although these studies were very promising, they were of necessity limited in scope. For this reason it was decided to investigate the effect of sodium nicotinate on a sufficiently large series of headaches regardless of etiology, and to determine if possible what types are suitable for vasodilator therapy.

In their experiments sodium nicotinate was used except in a few instances in which niacin was substituted. The intravenous route of administration was chosen for precision and the decisiveness of the clinical effect; 100 mg. of nicotinic acid or its equivalent as the sodium salt was taken as the standard dose because this amount was found adequate to produce a flush in almost every case One hundred consecutive headaches were treated over a period of months, and an attempt was made to exclude all neurotic or hypersensitive persons Of these 100 cases, 75 were completely relieved of their severe headaches following intravenous sodium nicotinate In these instances, relief of headache appears to be correlated with the degree of peripheral flush. Hence, on the basis of these findings, intravenous sodium nicotinate is recommended in the symptomatic treatment of (*a*) severe idiopathic headache, (*b*) migraine and (*c*) postspinal tap cephalalgia.

Folic Acid in Tropical Sprue

The work of T. D. Spies, R. M. Suarez, R. M. Suarez, Jr. and F. Hermandez-Morales (*Science* 104:75, 1946) has demonstrated that folic acid, an effective substance in the treatment of various anemias, also benefits persons with tropical sprue. To study the effects of folic acid, 5 patients were chosen and hospitalized. All showed typical symptoms like emaciation, glossitis and diarrhea. Following oral administration of folic acid, the clinical improvement of the patients after the third or fourth day was most striking. There was an increase in the sense of well being, strength and vigor. A part of the clinical improvement included a disappearance of the "indigestion," anorexia, sore tongue, pallor, and exhaustion, and a decrease in the amount of the stools. These findings demonstrate clearly the folic acid produces beneficial effects in persons with tropical sprue in relapse. These and additional patients are being studied to determine the long-time effects of folic acid in this disease.

Prostigmine for Heartburn in Pregnancy

According to the observations reported by H. M. Wiley (*Am. J. Obst. & Gynec.* 51:221, 1946), a single 15 mg. tablet of prostigmine bromide may completely relieve a pregnant patient of heartburn. If the symptom recurs, a second tablet is usually effective. Prostigmine, by increasing peristaltic activity, is a rational therapeutic agent, as the probable cause of heartburn in a gravida is reverse peristalsis with probable pylorospasm. Because of the distortion and position of the stomach during late months of pregnancy, gastric juice may be splashed into the lower esophagus. Of 20 pregnant patients with heartburn treated with prostigmine bromide, 15 were completely relieved by a single tablet within fifteen minutes; 2 were partially relieved and 2 had no relief. Results were inconclusive in 1 case.

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Compounder's Corner

B. P. Penicillin Preparations

New monographs on penicillin, including the definition of penicillin, directions for assay and formulas for cream, injection, oily injection, eye ointments, lozenges and ointment incorporating penicillin, have been incorporated in an amendment to the British Pharmacopoeia. The formulas for penicillin preparations are as follows:

Cream of Penicillin

Penicillin (sodium or calcium salt)	**50,000 units**
Emulsifying wax	**7.0 m.**
Hard paraffin	**5.0 m.**
Liquid paraffin	**41.0 m.**
Chlorocresol	**0.1 m.**
Distilled water previously boiled and cooled	**47.0 ml.**

Dissolve the chlorocresol with the aid of gentle heat in the distilled water, which has been previously boiled and cooled. Cool the solution to about 60°C. Melt together emulsifying wax, the hard paraffin and the liquid paraffin with the aid of gentle heat. Transfer to a suitable container and cool to about 60°C. Dissolve the penicillin (sodium calcium salt) in the chlorocresol solution and add it to the warm basis in the container. Close the container, shake vigorously for a few minutes and then cool rapidly.

Emulsifying wax is a mixture of higher fatty alcohols and the sodium alkyl sulphates obtained from them. It is obtainable in commerce under the Trade Mark "Lanette" Wax SX. In preparing sterilized cream of penicillin the proportions of hard paraffin and liquid paraffin may be varied, and yellow soft paraffin may be substituted, in order to produce a cream having suitable properties.

Sterilized Cream of Penicillin

Penicillin (sodium or calcium salt)	**50,000 units**
Emulsifying wax	**7.0 m.**
Hard paraffin	**5.0 m.**
Liquid paraffin	**41.0 m.**
Sterilized water	**47.0 ml.**

Melt together the emulsifying wax, the hard paraffin and the liquid paraffin with the aid of gentle heat. Transfer to a suitable container and add 37 ml. of the sterilized water warmed to about 60°C. Close the container and shake to emulsify. Place in an autoclave and heat to 115°C for 30 min. Cool to about 60°C and then add with aseptic precautions the penicillin (sodium or calcium salt) dissolved in 10 ml. of the sterilized water. Close the container, shake vigorously and cool rapidly.

Injection of Penicillin

Injection of penicillin is a sterile solution of penicillin (sodium or calcium salt) in physiological solution of sodium chloride. It is prepared by dissolving the contents of a sealed container in the requisite amount of physiological solution of sodium chloride, using aseptic technique. When several doses of injection of penicillin are dispensed in a single container the solution contains 0.1% of chlorocresol.

Oily Injection of Penicillin

Penicillin (calcium salt)	**12,500,000 units**
White beeswax	**4.5 m.**
Arachis oil, sufficient to produce	**100 ml.**

Melt the beeswax in the arachis (peanut) oil. Sterilize by heating at 150°C. for 1 hr.; at the same time filter through coarse filter paper. Cool. Place the calcium salt of penicillin in a sterilized mortar, and, using aseptic technique, triturate with a small quantity of the basis until smooth; then incorporate gradually the remainder of the basis. Distribute into sterilized containers and finally seal.

Penicillin Ointment for the Eye

Penicillin (calcium salt)	**100,000 units**
Yellow soft paraffin	**90 m.**
Wool fat	**10 m.**

Melt together the yellow soft paraffin and the wool fat, filter while hot through coarse filter paper placed in a heated funnel, and sterilize the mixture by heating at 150°C. for 1 hr. Cool. Place the penicillin (calcium salt) in a sterilized mortar and triturate with a small quantity of the basis until smooth, then incorporate gradually the remainder of the basis. Distribute into small sterile collapsible tubes and close.

Lozenge of Penicillin

Lozenge of penicillin contains 500 units of penicillin (calcium salt). It is prepared by the compression of a mixture of the calcium salt of penicillin and previously prepared dry granules of sucrose or lactose or a mixture of the two and suitable binding agents. Each lozenge weighs about 1 m.

Ointment of Penicillin

Penicillin (calcium salt)	**50,000 units**
Ointment of wool alcohols	**100 m.**

Heat the ointment of wool alcohols at 110°C. for 1 hr. Cool to room temperature. Triturate the penicillin (calcium salt) with a portion of the ointment until smooth; gradually add the remainder, mixing thoroughly by trituration.

T. G. A. Standards for Triethanolamine and Cetyl Alcohol

The Board of Standards of the Toilet Goods Association has released its standards for triethanolamine and cetyl alcohol. The Board suggests that all purchasers of these raw materials use these standards as minimum specifications. T. G. A. Specification No. 18 defines triethanolamine as a mixture of alkanolamines consisting chiefly of triethanolamine with variable amounts of monoethanolamine and diethanolamine. It should meet the following standards:

Color—Must meet buyer's specifications when tested by prescribed method.

Odor—Not more than slightly ammonical.

Solubility—Soluble in chloroform. Miscible in all proportions with alcohol and water.

Specific Gravity—1.1204 to 1.1284 at 25°C./25 °C.

Refractive Index—1.4800 to 1.4850 at 20°C.

Equivalent Weight—140 to 145.

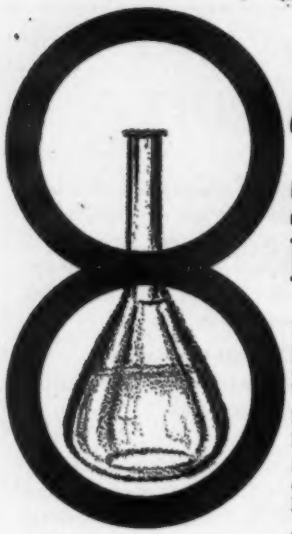
Ash—0.03% maximum.

Lead—1 part per million maximum as Pb.

Arsenic—1 part per million maximum as AS_2O_3.

Substances Reacting with Periodate—Not more than 6.2 ml. of 0.1 normal iodine is required per 0.1 gm. of the sample used in the test.

T. G. A. Specification No. 19 defines cetyl alcohol as a white unctuous mixture of solid alcohols consisting chiefly of



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CH_3, $(CH_3)_{14}CH_2OH$. *It should meet the following standards:*

Solubility—Soluble in ethanol, ether, chloroform and toluene.
Melting Point—47° to 49°C.
Acid Number—0.5 maximum.
Saponification Number—1 maximum.
Iodine Number—3 maximum.
Hydroxyl Number—218 to 232.
Ash—0.05% maximum.
Lead—1 part per million maximum as Pb.
Arsenic—1 part per million maximum as AS_2O_3.

Methods or sources of methods for the several tests are included. Details are given for determining Substances Reacting with Periodate (T. G. A. Method No. 23) in triethanolamine and for determining Hydroxyl Number (T. G. A. Method No. 24) for cetyl alcohol.

Modified Calamine Liniment

Because there has been an extreme shortage of olive oil required in making standard calamine liniment, J. G. Downing (*Arch. Dermat. & Syph.* 54:67, 1946) has found it necessary to modify the liniment by using liquid petrolatum. Because, on occasion, considerable difficulty has been experienced in making it, instructions for mixing are given in full, as follows:

	Gm. or Cc.
Prepared calamine N. F.	**80**
Zinc oxide	**80**
Solution of calcium hydroxide	**500**
Heavy liquid petrolatum	**1,000**

Place the solution of calcium hydroxide in an electric mixer, and start the motor. Add the calamine and the zinc oxide, and slowly add the heavy liquid petrolatum. Continue the mixing until the product is homogeneous.

Prepared as directed this mixture remains in emulsion for several days. Distilled water can be used instead of solution of calcium hydroxide, and the usual antipruritics, such as phenol and menthol, can be added. This lotion has been prescribed for the occasional patient who has a hypersensitivity to olive oil, and for several years, Downing has used it for extremely hypersensitive patients.

Antibacterial Rubber

According to an item in Foreign Commerce Weekly *for June 29, 1946, studies in France have resulted in the development of an antibacterial rubber. The aim of the research was to produce an antiseptic rubber which was also insecticidal, to sterilize homes and furniture. A base of standard para-isopropyl-metacresol in the form of crystals was incorporated with a pure rubber mixture. The crystals, soluble in the rubber at the moment of vulcanization, revert to solid when the rubber cools, and form a thin layer of bactericide 1 or 2 millimeters thick. All bacteria coming in contact with the layer were killed within 5 minutes. Even after the 212th day of trials, the impregnated rubber killed bacilli in time scarcely varying from that of the first day of trial. It is claimed that among many items which could be easily treated are carpets, shoes, soles, cushions, mattresses, rubber seals, waterproof sheets, telephones, and the like.*

Solubilization of Organic Liquids by Detergents

In a report on the solubilization of insoluble organic liquids by detergents, J. W. McBain and P. H. Richards (*Ind. & Eng. Chem.* 38:642, 1946) state that solubilization is attributed to incorporation of the insoluble substance within and upon the colloidal particles or micelles of the soap or detergent. Although many instances of this action have been reported, this is the first attempt at a systematic investigation of the characteristics of an insoluble organic substance that determine the extent to which it is solubilized. A number of cation-active and anion-active detergents have been used with a series of aliphatic and aromatic hydrocarbons, in addition to a number of polar compounds. Substances of very low molecular weight are freely solubilized, but the extent of solubilization falls off rapidly with increase in molecular weight or molar volume. Polar compounds are more readily solubilized than hydrocarbons. Although, in general, the various detergents show parallel behavior, merely differing in degree of solubilizing power, and the cation-active detergents are generally better solubilizers than the anion-active detergents, there are numerous specificities and influences of structure, both of the detergent and of the material being solubilized. Soaps and detergents that have in common the twelve-carbon paraffin chain differ greatly in solublizing power, each favoring particular classes of chemical substances.

Calamine

Few of the many substances employed today in both pharmaceutical and cosmetic products have been used over such a long period of time as calamine, says J. Rae (Manuf. Chem. & Manuf. Perf. *17:199, 1946). It has been prescribed by the medical profession for well over a century, and calamine is also used by the pharmacist and by the cosmetics manufacturer as an ingredient of various dusting powders, lotions and ointments. In spite of its long history, calamine is still as popular as ever, and during the ten years prior to the war, increasing quantities were being used.*

To meet modern requirements, calamine is best prepared by coloring zinc carbonate with various iron oxides. The carbonate should conform with official requirements and be of medium density. For a pale tint, 1.5 per cent of Armenian bole is suitable. A good rachel or skin tint is given by:

Armenian bole	**3.0 per cent**
Yellow ochre	**4.0 " "**

After incorporation of the colored oxides, very efficient mixing and sieving are required.

Calamine lotion is the most popular of all preparations of calamine. A good formula is as follows:

Calamine	**5.0-10.0 per cent**
Zinc oxide	**5.0 " "**
Glycerine	**3.0 " "**
Rose water, to make	**100.0 " "**

After mixing, the product should be brushed through a fine sieve, not coarser than 120 mesh. No suspending agent in the form of gum or such, should be added; the lotion will separate on standing, but shakes up very readily.

An improved calamine lotion, which remains more or less in permanent suspension, can be made as follows:

Calamine	**15.0 per cent**
Bentonite	**2.5 " "**
Rose water, to make	**100.0 " "**

A colloidal calamine lotion, said to be an excellent remedy for sunburn, which settles only very little and is readily shaken up can be made as follows:

Zinc sulfate	**5 lb.**
Boiling distilled water	**2 gal.**
Sodium carbonate	**5 lb.**
Boiling distilled water	**2 gal.**

Pour the soda solution into the zinc sulfate solution; stirring well until effervescence ceases. Allow to stand, siphon off the clear liquid and wash with further quantities of distilled water until the washings are free from sulfates. Drain the precipitate on a calico cloth, but do not allow it to become dry. Transfer the moist magma to a large mortar or mixer, incorporate 10 to 15 gr. of Armenian bole and sufficient distilled water to make up to 15 pounds weight.

ISOPROPYL ALCOHOL AVAILABLE FOR:

SHAMPOOS: Isopropyl Alcohol aids in cleaning hair and scalp thoroughly and in leaving hair soft and lustrous.

HAIR AND SCALP PREPARATIONS: Isopropyl Alcohol as a vehicle for hair and scalp preparations aids the cleansing and antiseptic value of the tonics.

STERILIZING SOLUTIONS: 40% Isopropyl Alcohol will kill dried Bacillus Coli in ¼ minute. 50% Isopropyl Alcohol is equivalent to 70% ethyl alcohol for killing Bacillus streptococcus and staphlococcus.

BODY RUBS: Isopropyl Alcohol evaporates slowly, thereby prolonging the cooling effect when used in body rubs. Isopropyl Alcohol has no denaturants.

FACE AND HAND LOTIONS: Isopropyl Alcohol evaporates slowly, has little tendency to dry the skin, and aids in keeping the skin soft.

AFTER SHAVE LOTION: Isopropyl Alcohol is excellent for this product because it aids the after-cooling and skin-freshening qualities of the lotion.

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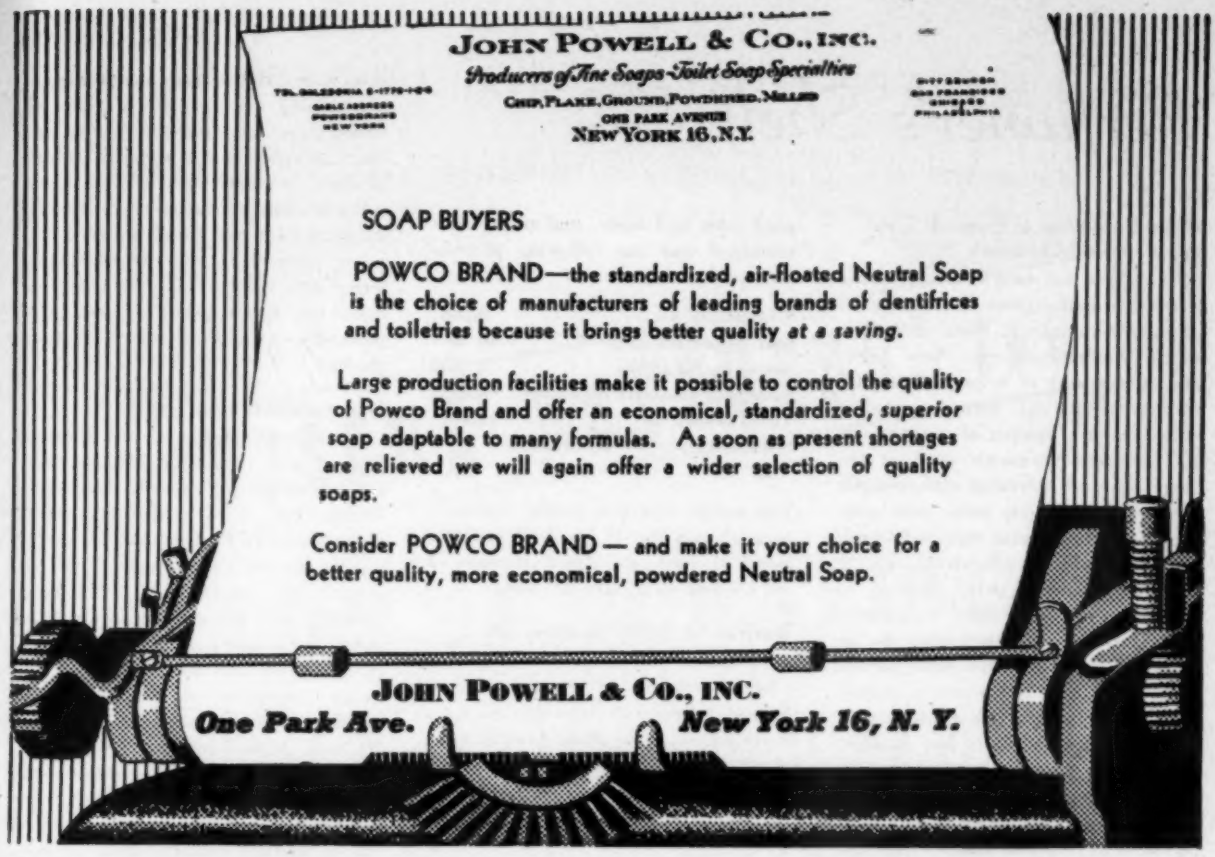
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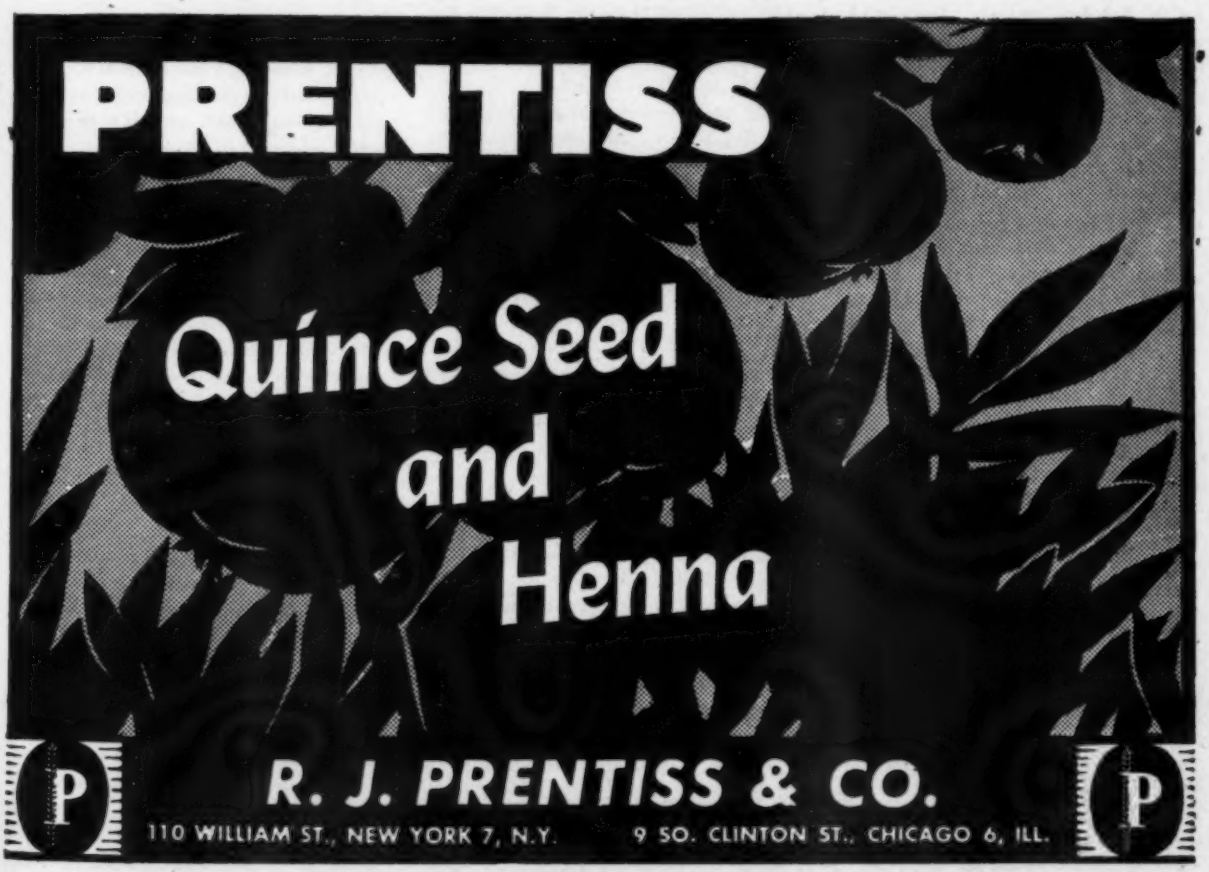
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Perfumer's Shelf

Irritant Properties of Essential Oils and Aromatic Chemicals

In a report delivered at the Flavoring Extract Manufacturers Convention in Chicago, Alexander E. Katz, of the Essential Aromatics Corp., New York, gave the results of a preliminary investigation on the dermal irritating properties of a number of essential oils and aromatic chemicals used in the manufacture of flavoring and cosmetic preparations. These tests were conducted on adult human male and female volunteer subjects. Essential oils or aromatic chemicals were applied in their pure undiluted form to an area approximately one centimeter in diameter of the skin on the inner portion of the lower arm. In the case of crystalline substances, saturated alcoholic solutions were applied in a like manner. Immediately following application, the area was covered with an adhesive bandage which was allowed to remain for a period of twenty-four hours. The tests were read at twenty-four-hour intervals for a five-day period. Applications which produced visible inflammation, irritation, formation of a papular rash, or any abnormal condition of the area, were considered as positive reactions. All positive reactions were confirmed by repetition of the test on the same subject after complete disappearance of positive symptoms.

On the basis of the findings essential oils of: Clary Sage, Cloves, Lemon, Neroli, Orris Liquid, Patchouli and others, and the aromatic chemicals, alcohol C-9 (nonyl alcohol) alcohol C-10 (decyl alcohol), aldehyde C-10 (decyl aldehyde): cinnamic alcohol (cryst.) citronellol: ethyl cinnamate: ethyl phenyl acetate, eugenol, phenyl ethyl acetate, phenyl ethyl alcohol, may be assumed to be non-irritating when applied to the skin. Such products as methyl nonyl acetic aldehyde (C-12). and some others, particularly aldehydes, were found to produce positive reactions in four out of thirty-three tests conducted.

Persian Lime Oil

A note in the *Perfumery and Essential Record* (37:147, 1946) gives information to the effect that oil obtained from culled Persian limes has been investigated and samples obtained by the cold-press process. These are generally of good odor and body, and one sample examined had the following physical constants:—

S.G. at 20° C.	0.848
Opt. rotation at 20° C.	40°30′
Viscosity at 20° C.	1.4849
Aldehyde content (as citral)	6.01%
Total solids	11.4%
Solubility in 90% alcohol at 20° C.	Clear

This sample was then distilled and fractionated and the 10 per cent distillate found to have an optical rotation of 50° 56′ and a viscosity of 1.6840.

Brazilian vs. U.S.P. Sassafras Oil

In recent years, says A. A. Dodge (*Amer. J. Pharm.* 118:116, 1946) a sassafras oil of Brazilian origin has appeared in commerce. This product is said to be obtained by the steam distillation of the wood of *Ocotea pretiosa* Benth. & Hook. f. (Fam. *Lauraceae*). It thus originates from a source entirely different from the sassafras oil recognized by the U. S. P., which is obtained by the steam distillation of the root of *Sassafras albidum* (Nuttall) Nees (Fam. *Lauraceae*). At the present time the Brazilian oil may be used only for technical purposes, e.g., the synthesis of heliotropin from the safrol it contains. It differs, physically, from the official sassafras oil in that its specific gravity is greater, its refractive index higher, and in being slightly laevorotatory.

In order to gain information as to the acceptability of the non-official Brazilian sassafras oil for flavoring purposes, taste tests of aromatic waters prepared from this oil and odor tests of an alcoholic spirit (5 per cent) and of the original oil were conducted on a group of twenty-eight individuals who volunteered for this investigation. For purposes of comparison, identical tests were conducted on Oil of Sassafras U. S. P. Each test subject, therefore, had the opportunity to determine his preference in a series of five tests, each of which consisted of one pair of products.

Analysis of the data obtained from these tests shows that there is a marked preference for the flavor of the Brazilian oil in all of the taste tests. The same results were noted in the odor test on the spirit. In the odor test on the original oils, the preference was almost equally divided. Inasmuch as these tests were conducted for the purpose of determining whether the Brazilian oil would prove acceptable in flavor and odor on equal terms with the official product, it would appear that those subjects who expressed no preference might be included, for all practical purposes, with those who definitely preferred the Brazilian oil. If this were done, the choice would be even more markedly in favor of this non-official product.

Microsublimation of Cloves

According to H. Karma and F. Gronberg (*Farm. Notisblad*, 54:347,1945, through *Quart. J. Pharm. & Pharmacol.* 19:76, 1946) when cloves are heated, and allowed to cool, crystals of caryophyllin appear. This reaction may be used for the identification of the drug, although it is also given by the fruit or flower stalks. In the micro-sublimation of cloves, the first fraction formed oily drops, consisting of eugenol; caryophyllin could not be detected in this fraction. After standing for some days, the sublimate obtained at reduced pressure crystallized, and the crystals were identified as vanillin. Later fractions of the sublimate showed small crystals which were not identified, and finally the large crystals of the last fraction were found to be caryophyllin. This compound, which has the formula $C_{48}H_{30}$(OH)COOH, is identical with the sapogenin of sugar-beet, and with oleanolic acid.

Russian Synthesis of Coumarin

A new and economical commercial synthesis of coumarin has been described by L. Y. Brynsova (*Pishchevaya Prom.* 1945, through *Chem. Abstr.* 40:-3740, 1946). In this method, salicylaldehyde and acetic anhydride are mixed and the temperature of the mixture is slowly raised to 205 to 210°C. During this period, acetylation of salicylaldehyde takes place and partial cyclization to acetic anhydride occurs. More acetic anhydride or a mixture of salicylaldehyde and acetic anhydride is added to complete the cyclization. At the end of the reaction the temperature is from 220 to 225°C. The duration of the synthesis is six to seven hours. The yield of coumarin obtained after vacuum distillation and recrystallization from alcohol is from 40 to 45 per cent.

Oxidation of Camphene in Emulsions

In a series of studies on the activation of camphene, A. A. Berlin, A. B. Davankov and L. E. Kalliopin (*J. Applied Chem.* (U.S.S.R.) 18:217, 1946, through

FRITZSCHE BROTHERS, Inc.

COMMEMORATING

SEVENTY-FIVE YEARS OF SERVICE

1871 1946

OUR *Seventy-fifth* ANNIVERSARY

WHILE statistics show that the business life of the average firm is only seven years, there are actually hundreds of organizations in the United States that have long since passed the milestone which we in Fritzsche Brothers are now celebrating. It is not, therefore, as an achievement of uncommon distinction that we commemorate this Seventy-fifth Anniversary of our founding, but rather as one from which we derive personal — and perhaps pardonable — satisfaction and pride. For we have endeavored earnestly and honestly, throughout these seventy-five years, to conduct every phase of our business in a manner beneficial to our customers and creditable to ourselves. We have sought, at considerable expense, to go beyond recorded data and learn all we could about the raw materials and finished products of our trade. Having learned, we have spread this knowledge freely so that all concerned might truly benefit. We have tried, within the limits of our ability—and by good example—to lift prevailing standards toward a higher level. And for these contributions to an industry that serves more people in more varied ways each day of their lives than almost any other, we may well be proud.

Entering the field of essential oils in 1871 when crude methods of production and lack of scientific knowledge were serious handicaps to the industry's progress, the then small firm of Fritzsche Brothers assigned itself a role of service which it has adhered to assiduously throughout the years. In peace and in war, in good times and bad, it applied itself methodically and conscientiously to the problems of its customers and to the bigger problems of its industry. Today, no longer small and insecure, but standing solidly upon a foundation three-quarters of a century in the making, Fritzsche Brothers looks back upon a job well done and toward a future resplendent with promise.

FRITZSCHE BROTHERS, Inc.

Since our Founding

1871 — 1880

PARTNERSHIP of Fritzsche Brothers opens for business August 28, 1871 in downtown New York . . . The great Chicago fire . . . Sand blasting invented . . . Re-election of President Grant . . . Montgomery Ward starts first mail order house . . . Air brake perfected by Westinghouse . . . Automatic car coupler developed by Janney . . . Panic in N. Y. begins with bank failures . . . California puts cable street cars in operation . . . Field experiments with electric railway . . . Refrigerator car introduced by Swift . . . Bouchardat polymerizes isoprene into dipentene — the first synthesis of a terpene . . . Tilden develops the nitrosochlorides as means of identification of organic compounds . . . Compressed air shield advances subway construction . . . Bell utters first words transmitted by telephone . . . Pasteur advances germ theory . . . Centennial Exhibition in Philadelphia . . . General Custer and soldiers slain by redskins under Sitting Bull . . . American Chemical Society founded . . . Russia declares war on Turkey . . . First moving picture shows race horse in action . . . Kuhne gives the name "enzyme" to organic catalysts . . . Edison patents phonograph . . . Invents incandescent electric light . . . The cash register is perfected . . . Gas engines, microphones and the mimeograph invented . . . Arc lights brighten Broadway . . . First American appearance of Sarah Bernhardt . . . Garfield elected President.

1881 — 1890

FRITZSCHE Brothers now operating a factory in Hoboken . . . President Garfield shot . . . Arthur assumes Presidency . . . French commence work on Panama Canal . . . Koch discovers tuberculosis germ . . . Klebs isolates diphtheria bacillus . . . Rayon produced by Swan . . . Brooklyn Bridge opened . . . Volcano Krakatoa blows up — world's greatest explosion . . . Wallach, "Father of Chemistry of Terpenes," begins his researches . . . Parsons introduces the steam turbine, Waterman the fountain pen . . . Mergenthaler invents linotype and Daimler the motorcycle . . . Cleveland elected President . . . Baltimore opens first electric street railway in U. S. . . . *Carl Brucker heads Fritzsche Brothers following death of Paul Fritzsche* . . . Statue of Liberty comes to U. S. as gift from France . . . Electrolytic production of aluminum developed by Hall . . . Thomsen develops electric welding . . . Hertz first demonstrates electromagnetic waves . . . The great Blizzard of '88 . . . First edition of the National Formulary is published . . . Discovery of acetylene gas . . . The Johnstown flood . . . Nellie Bly circles globe in 72 days . . . Mendeléeff suggests periodic law of atomic elements . . . Eiffel Tower opens at Paris World's Fair . . . The halftone process of reproduction is introduced . . . Also the adding machine, the dry battery, photographic film and the Kodak . . . The gasoline buggy appears . . . Ellis Island opened as Immigration Depot . . . Harrison becomes President . . . Smokeless gun powder is invented . . . Woman's suffrage voted for in Wyoming . . . Sherman Anti-Trust Laws adopted.

1891 — 1900

BICYCLES get pneumatic tires . . . Carborundum is discovered . . . Steinmetz advances laws of alternating current . . . Ives produces color photography and color printing . . . Addressograph invented . . . Ferris wheel invented . . . Chicago World's Fair (Columbian Exposition) . . . The Diesel engine invented . . . Tiemann investigates irone leading to discovery of ionones . . . Van Baeyer elucidates benzene ring . . . Depression strikes nation . . . Coxey's Army marches on Washington . . . *Messrs. Leonhardt and Watermeyer come to Fritzsche Brothers, the former directing technical activities* . . . National Association of Manufacturers organized . . . Gillette introduces new type razor blade . . . X-rays discovered by Roentgen . . . Cleveland again President . . . Insurrection in Cuba . . . Radio activity discovered by Becquerel . . . Beginning of Rural Free Delivery . . . Langley experiments with power driven flying machine . . . Andree attempts balloon flight over North Pole . . . McKinley elected President . . . U. S. Battleship Maine blown up in Havana Harbor . . . Spanish-American War . . . Curies discover radium . . . U. S. acquires Philippines . . . Aspirin produced . . . A period of great investigation of solvents for extraction of oils: petroleum ether,
China . . . The Galveston Floo
pretation . . . Planck devises q

1901 — 1910

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plane flight . . . Mercury vapor
fire . . . The Russo-Japanese Wa
reflexes, wins Nobel Prize in me
on Panama Canal . . . Von B
Prize for researches in chemistry
tivity . . . Sperry invents gyrosc
is founded . . . Earthquake and
Drug Act is passed . . . Financi
by De Forest . . .LeBrocq disco
. . . Admiral Peary discovers N
goes to Wallach . . . First aerop
fects tungsten lamp.

1911 — 1920

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The Titani
Fritzsche Brothers upon death of
of U. S. . . . Income Tax Law
dedicated at The Hague . . . Gas
. . . Panama Canal opened to ship
Federal Reserve Bank system is c
tising . . . Lusitania sunk . . . Pr
invented by Tait . . . U. S. declar
through adoption of The 18th Am
Wilson enunciates his famous 14
mail route . . . Daylight saving i
Bolshevists assassinate Russian ro
signed . . . Russian Comintern is
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Newfoundland to England . . . Alc
crossing from Newfoundland to
makes flight from Scotland to U.
. . . The 19th Amendment procl
. . . Harding elected President . .

1921 — 1930

BANTING
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adopted at
covered by Millikan . . . Ruzicka
civetone, muscone, etc. . . . Essent
manufactured commercially . . . G

nding . . . THE DECADES IN REVIEW:

ion of oils: petroleum ether, benzene, etc. . . . The Boxer Rebellion in China . . . The Galveston Flood . . . Freud advances theory of dream interpretation . . . Planck devises quantum theory.

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1901 — 1910

McKINLEY assassinated . . . Theodore Roosevelt takes oath of office . . . First Nobel Prizes awarded . . . Marconi sends first wireless signal across Atlantic from England to Newfoundland . . . High speed tool steel developed . . . Mt. Pelee erupts . . . Pioneering studies of hormones . . . First Pacific cable connects San Francisco and Honolulu . . . U. S. establishes Department of Commerce . . . Komppa synthesizes camphor . . . Wrights make first successful motor-propelled aeroplane flight . . . Mercury vapor arc invented by Hewett . . . The Baltimore fire . . . The Russo-Japanese War . . . Pavlov, noted for work on conditioned reflexes, wins Nobel Prize in medicine and physiology . . . U. S. starts work on Panama Canal . . . Von Baeyer, discoverer of indol, awarded Nobel Prize for researches in chemistry . . . Einstein advances his theory of relativity . . . Sperry invents gyroscopic compass and stabilizer . . . Rotary Club is founded . . . Earthquake and fire level San Francisco . . . The Food and Drug Act is passed . . . Financial panic in U. S. . . . Audion tube invented by De Forest . . .LeBrocq discovers novocaine . . . Taft elected President . . . Admiral Peary discovers North Pole . . . Nobel Award for chemistry goes to Wallach . . . First aeroplane take-off from a ship . . . Coolidge perfects tungsten lamp.

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1911 — 1920

CURTISS develops hydroplane . . . Funk isolates vitamins . . . Self-starters for autos . . . First transcontinental flight by Rogers in 84 hours and 2 minutes . . . Italian-Turkish War . . . Ehrlich produces salvarsan . . . Founding of U. S. Chamber of Commerce . . . Grignard and Sabatier win Nobel Prizes for their work in organic chemistry . . . First parachute jump from aeroplane . . . Remains of "Piltdown Man" uncovered . . . The Titanic disaster . . . *F. E. Watermeyer heads Fritzsche Brothers upon death of Carl Brucker* . . . Wilson elected President of U. S. . . . Income Tax Law becomes effective . . . World Peace Palace dedicated at The Hague . . . Gasoline cracking process developed by Benton . . . Panama Canal opened to shipping . . . The First World War begins . . . Federal Reserve Bank system is created . . . Neon tubes first used in advertising . . . Lusitania sunk . . . President Wilson re-elected . . . Depth bomb invented by Tait . . . U. S. declares war . . . Prohibition comes to the U. S. through adoption of The 18th Amendment to the Constitution . . . President Wilson enunciates his famous 14 Points of Peace . . . America gets first air mail route . . . Daylight saving introduced . . . Armistice brings peace . . . Bolshevists assassinate Russian royal family . . . The Treaty of Versailles is signed . . . Russian Comintern is organized . . . *Fritzsche Brothers incorporates with Mr. Watermeyer as President* . . . Navy seaplane NC-4 flies from Newfoundland to England . . . Alcock and Brown make first non-stop Atlantic crossing from Newfoundland to Ireland by air . . . British dirigible R-34 makes flight from Scotland to U. S. and return . . . The League of Nations . . . The 19th Amendment proclaimed effective, giving suffrage to women . . . Harding elected President . . . First radio broadcast.

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1921 — 1930

BANTING discovers insulin . . . Post-war depression followed shortly by era of prosperity . . . *Our firm celebrates its Fiftieth Anniversary* . . . Portuguese aviators make first plane crossing of South Atlantic . . . Union of Soviet Socialist Republics convenes in Moscow . . . Mussolini's Black Shirts march on Rome . . . Ethyl gasoline arrives . . . Coolidge becomes President upon Harding's death . . . International Protocol Standards adopted at Brussels Conference . . . Cosmic ray is discovered by Millikan . . . Ruzicka and co-workers elucidate ring-structure of civetone, muscone, etc. . . . Essential Oil Association organized . . . Dry ice manufactured commercially . . . *Guenther makes first of Fritzsche Brothers' essential oil surveys* . . . Byrd flies to North Pole . . . Talking movies introduced . . . Lindbergh makes lone flight, non-stop, New York to Paris . . . *Fritzsche buys Les Parfumeries de Seillans factory in France* . . . Isolation of first vitamin to be identified chemically—ergosterol, the anti-rachitic vitamin D . . . First successful flight of autogiro by de la Cierva . . . Hoover elected President . . . Dirigible Graf Zeppelin makes east to west flight around world . . . Stock market crash ends era of prosperity . . . Byrd flies to South Pole and back . . . Fleming discovers penicillin . . . First experimental television transmitter . . . Quick-freezing introduced by Birdseye . . . Lowell discovers planet Pluto . . . Carothers invents nylon.

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1931 — 1940

JAPAN invades Manchuria . . . Lawrence and Livingston develop the cyclotron used in nuclear research . . . Epidemic of "bank holidays" . . . F. D. Roosevelt becomes President . . . N.R.A. and the Blue Eagle . . . Chicago opens Century of Progress Exposition . . . Wiley Post, flying alone, circumnavigates the globe in less than a week . . . Urey awarded Nobel Prize for work on heavy water . . . Hitler rises to power . . . U. S. devaluates the dollar . . . *F. H. Leonhardt becomes President of Fritzsche Brothers upon death of F. E. Watermeyer* . . . Congress votes Philippine Independence . . . Italy clashes with Ethiopia . . . *Fire destroys part of Fritzsche's Beekman Street plant; important move to Port Authority Building results* . . . Social Security adopted by U. S. . . . Therapeutic value of sulfanilamide first reported . . . League of Nations declares economic sanctions against Italy . . . Spanish Civil War . . . *Clifton Chemical Laboratories purchased by Fritzsche Brothers* . . . Nazis march into the Ruhr, the Rhineland, Austria and Czecho-Slovakia . . . Fermi's work in nuclear physics gains him Nobel Prize . . . Spanish Civil War ends with defeat of Loyalists . . . New York World's Fair opens . . . Rome-Berlin Axis announced . . . Nobel Prize for chemistry is shared by Ruzicka . . . Studies in nuclear physics indicates possibility of atomic fission . . . Second World War begins with Poland and France quickly overrun . . . Whittle pilots first flight of jet-propelled plane . . . New element 93 — neptunium — discovered . . . Bactericidal agent, gramicidin, isolated by Dubos.

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1941 — 1946

RADIO-ACTIVE plutonium, the 94th element, is obtained from uranium 238 . . . Japs attack Pearl Harbor . . . U. S. declares itself at war . . . Germany and Italy join their Axis partner against U. S. . . . Philippines overrun by enemy . . . The Atlantic Charter asserts peace aims of Britain and U. S. . . . A period of all-out production for war . . . Rationing . . . Radar perfected . . . Doolittle leads air squadron in first attack on Japanese mainland . . . Waksman isolates streptomycin . . . The Siege of Stalingrad . . . Troop landings in Africa . . . Italy . . . and finally Normandy . . . Progress in the Pacific . . . Guam and Philippines re-won . . . Landings on Iwo and Okinawa . . . President Roosevelt dies, serving fourth term in office . . . Truman assumes Presidency . . . Germany capitulates . . . The "Manhattan Project" and first atomic bomb . . . Japan surrenders unconditionally . . . The United Nations Organization seeks formula for permanent peace . . . *Fritzsche Brothers, Inc., celebrates Seventy-fifth Anniversary.*

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BRANCH STOCKS

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FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

Chem. Abstr. 40:3741, 1946) report the advantages of carrying out the procedure in emulsions. They found that oxidation of camphene by chromic acid-sulfuric acid at from 80 to 90°C. in the presence of 2.5 per cent naphthenesulfonic acids as emulsifiers proceeds one and one-half to two times more rapidly than does the reaction without emulsification, with a yield increase of 5 to 7 per cent at this temperature and up to 15 per cent at from 60 to 70° C. The yields of camphor range from 70 per cent at 80 to 90° C. to 88 per cent at 60 to 70°C.

Booklet on Aldehydes

A new booklet, "Aldehydes," has just been published by Carbide and Carbon Chemicals Corporation, a Unit of Union Carbide and Carbon Corporation. This booklet presents in detail the properties and specifications of an industrially important group of aldehydes including butyraldehyde, ethylbutyraldehyde, ethylhexaldehyde, ethylpropylacrolein, and glyoxal. These aldehydes are raw materials in the chemical synthesis of dyes, flavors, perfumes, and other industrial products. Characteristic of aldehydes, the compounds can be oxidized to acids, reduced to alcohols, and will by addition and condensation reactions form acetals, cyanhydrins, dioxolanes, imines, oximes, hydrazones, esters, aldols, and polymers. Copies of the booklet (Form 5278) may be obtained from Carbide and Carbon Chemicals Corporation, 30 East 42nd Street, New York 17, N. Y.

Decolorization in Perfumery

Following an outline of the history relative to the preparation of concretes, absolutes, and resinoids, M. Gordon (*Chemie & Industrie* 53:314, 1945) presents a study of their decolorization by various methods. Among these are fractionation, entrainment with glycol, entrainment with phthalate, extraction with alcohol, decolorization with bone black, with activated charcoal, and with decolorizing earth. The charcoal method seems to be the most effective. Gordon believes that extraction with alcohol must be discarded. The ethyl phthalate method may be used in certain cases, particularly when it is sought to incorporate the solvent into the commercial product. Good results obtained on tree-moss resinoids should be ever more favorable with less colored products such as absolutes. Fractionation, he feels, must be discarded except with galbanum. Bone black does not seem to give good results. The use of decolorizing earths alone does not appear to be of any interest, but in the presence of activated charcoal they seem to have some decolorizing power.

Storing Oil of Chenopodium

In studies to determine the best storage conditions for chenopodium oil, A. K. Mukerji and K. K. Sen Gupta (*Indian Med. Gaz.* 80:347, 1945) tested the effects of light and heat on the ascaridole content of the oil. In their work, separate samples of chenopodium oil of known ascaridole content were stored for one year under different conditions, with respect to light and heat exposure, and periodically assayed for ascaridole. The best conditions for storing the oil calls for a temperature below 75° C. and protection from direct sunlight.

Turpentine Oils

It has been proposed that the new monograph on Turpentine Oil, to be included in the forthcoming eighth edition of the "National Formulary," be revised so as to allow the inclusion of steam distilled wood turpentine. A communication from one of the principal producers of this type of turpentine oil, published in the *Bulletin of The National Formulary Committee* (14:114, 1946, lends support to this proposal and provides considerable pertinent data. For example, it is pointed out that the composition of well refined gum turpentine and steam distilled wood turpentine may be considered to be essentially as follows:

	Gum Turpentine Oil
Alpha-pinene	55 - 65 per cent
Beta-pinene	25 - 35 per cent
Camphene	0
Other terpenes	3 - 7 per cent

	Steam Distilled Wood Turpentine Oil
Alpha-pinene	80 - 85 per cent
Beta-pinene	0 - 2 per cent
Camphene	3 - 8 per cent
Other terpenes	10 - 15 per cent

Consideration of these and other data indicate that the most important differences in composition between gum turpentine and wood turpentine are:

(1) Gum turpentine contains a considerably higher proportion of beta-pinene than steam distilled wood turpentine.

(2) Steam distilled wood turpentine contains a considerably higher proportion of alpha-pinene than gum turpentine.

(3) Steam distilled wood turpentine contains a larger amount of monocyclic terpenes than gum turpentine, about 5 to 10 per cent as compared to 3 to 7 per cent.

(4) The pinene content of gum turpentine is about 95 per cent whereas the pinene content of steam distilled wood turpentine is about 85 per cent. In addition, steam distilled wood turpentine contains about 5 per cent of camphene, a bicyclic terpene.

(5) Steam distilled wood turpentine will contain small amounts of terpene alcohols such as alpha-terpineol, borneol, and fenchyl alcohol whereas these alcohols are not found in fresh gum turpentine. Alcohols tentatively identified as pinocarveol hydrate are found in gum turpentine but not in steam distilled wood turpentine.

(6) Both turpentines contain small amounts of methyl chavicol and traces of phenols.

(7) Steam distilled wood turpentine contains traces of furfural and benzaldehyde which are reported absent in fresh turpentine.

Hence the most significant difference between gum turpentine and wood turpentine is the amount of beta-pinene present. Beta-pinene has a specfic gravity at 15.6/15.6°C. of 0.871 and a refractive index at 20°C of 1.4755 as compared to alphapinene, specific gravity at 15.6/15.6°C. of 0.862 and refractive index at 20°C. of 1.465. Hence, the specific gravity and refractive index of gum turpentine is uniformly higher than that of steam distilled wood turpentine. It is for this reason that steam distilled wood turpentine never conforms to the U.S.P. XII specification for turpentine in refractive index and occasionally in specific gravity.

From this it would appear that the only U. S. P. XII specification for Turpentine Oil which wood turpentine fails to meet are: "Source", and the physical constants—specific gravity and refractive index. It is therefore suggested that the new N. F. VIII monographs for Oil of Turpentine and Rectified Oil of Turpentine be modified as follows:

(1) Change the definition of Turpentine Oil so as to include steam distilled wood turpentine.

(2) Change the specific gravity to a minimum of 0.852 at 25°C.

(3) Change the refractive index at 20°C. to a minimum of 1.4650.

Another convincing argument for the change is the fact that many consumers of turpentine, including some of the large manufacturers of proprietary medicinal compounds, have found these turpentine oils interchangeable.

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Alcohol Production Resumed, Prospects More Hopeful on Expectations of Increase in Processing Molasses

Some 10,000,000 to 15,000,000 gallons of Cuban blackstrap molasses above the 115,000,000 gallons previously arranged for may be forthcoming for alcohol production in the United States. While Cuba has by agreement with the United States Department of Agriculture until September 30 to say what additional amounts of molasses can be exported to the United States above the previous commitments, observers believe that Cuban stocks are sufficient to permit sizable additional quantities.

Meanwhile industrial ethyl alcohol production after a complete stoppage in July has been permitted to be resumed at June levels. Producers have been assured sufficient molasses to enable them to produce 35 per cent of their sales for internal consumption. The remaining 65 per cent must be obtained from the stockpile.

Meanwhile the stockpile is declining at about the same rate as in June and producers foresee a squeeze in supplies in November or December unless provisions are made for more raw material. At the current rate of withdrawal the stockpile may be exhausted toward the end of the year.

Grain from the bumper new crop might be used but producers believe its high price may be a stumbling block to its use as a raw material for industrial alcohol. Producers are still awaiting action by OPA on their request made about two months ago for a higher ceiling. The present 53½c ceiling is held insufficient because production costs are high when the output is held so far below the capacity of the plants.

Glycerin Easing

Some easing in the tight glycerin supply can be expected if the flow of tallow to soapers is resumed following announcement by the Office of Price Administration that no change in the present ceilings on inedible fats is in prospect.

The price agency denied reports that it is contemplating upward revisions in the ceilings on inedible fats. Ceilings as of June 30 were reinstated under the new OPA bill. Reports that higher ceilings would be granted have led sellers to withhold fats from the market and production of soap and its by-product glycerin has declined markedly since OPA was revived due to the unavailability of fats.

If the OPA announcement brings offerings of tallow, the stored material will be processed in soap kettles at a far faster rate than recently. Due to lack of storage space renderers cannot continue to hold back fats indefinitely. However, while some improvement in glycerin appears probable soon, producers warn that scarcities will continue until the overall fats and oils supply is relieved.

Fats, Oils Situation Surveyed

Stocks of animal and vegetable oils and fats are at the lowest in fifteen years, according to a survey on oils and fats just completed by the National Industrial Conference Board. While production and consumption were considerably stepped up during the war, severely decreased imports and vastly increased exports resulted from the elimination of Far Eastern sources and from disappointingly low imports from South America. Since the war, heavy demands from the United Nations have placed a severe strain on American supplies.

The shortage of fats and oils brought tightened Government restrictions in 1946. This condition appears to have resulted mainly from dislocations of foreign trade. In 1945, stocks decreased somewhat more than exports exceeded imports—an abnormal situation since it represents a 50 per cent drop in imports below 1937-41 averages.

Penicillin July Exports Totaled $10,000,000

Approval of nearly $10,000,000 worth of penicillin for export from the United States during July was announced by the Office of International Trade, Department of Commerce. Double the anticipated July sales in the United States, the amount was approximately ten times the export sale of all drugs and

(*Continued on page 413*)

AUGUST PRICE CHANGES

UP

Apricot kernel oil 5c
Arabic gum powd. 1½c
Arnica flowers 40c
Arrowroot 1½c
Bois de Rose 15c
Carnauba wax 8c
Cod liver oil $2. bbl.
Cohosh root 2c
Culvers root 5c
Ergot 5c
Henna leaves 4c
Ipecac root $3
Lemon grass oil 75c
Mace oil 50c
Nutmeg oil $2
Orange oil Calif. 15c
Papain 75c
Rhatany root 1c
Rhubarb root 50c
Safrol 15c
Sarsaparilla root Mex. 13c
Senna Alex. 4c
Tinnevelly 4c

DOWN

Aloes Curacao 5c
Anise oil 15c
Asafetida 15c
Bergamot oil $1.65
Caraway oil 65c
Cascara Sagrada 4c
Cassia oil redist. 35c
Chamomile flowers Roman 25c
Eucalyptus oil 13c
Galbanum gum 5c
Glycerin 1¼c
Kamala 5c
Lavender spike oil 5c
Mastic gum 25c
Orris root Flor. 3c
Psyllium seed black 5c
Ylang Ylang oil $2.25

• **Prices quoted in this section were current on the first of this month.**

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PHENOBARBITAL U.S.P. & SALTS
PENTOBARBITAL SODIUM U.S.P.
THEOPHYLLINE U.S.P.
DIACETYL
PHENYL ACETIC ACID
BENZALDEHYDE
BENZYL ALCOHOL
BENZYL CHLORIDE
BENZYL CYANIDE
DIETHYL MALONATE
DIMETHYL UREA
CYANOACETAMIDE
CYANO ACETIC ACID
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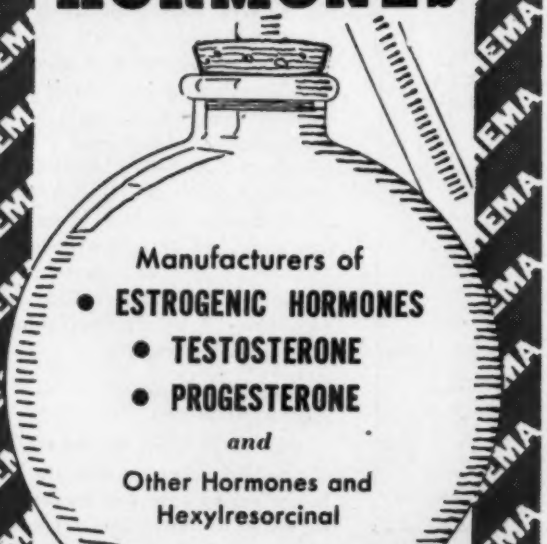
HORMONES



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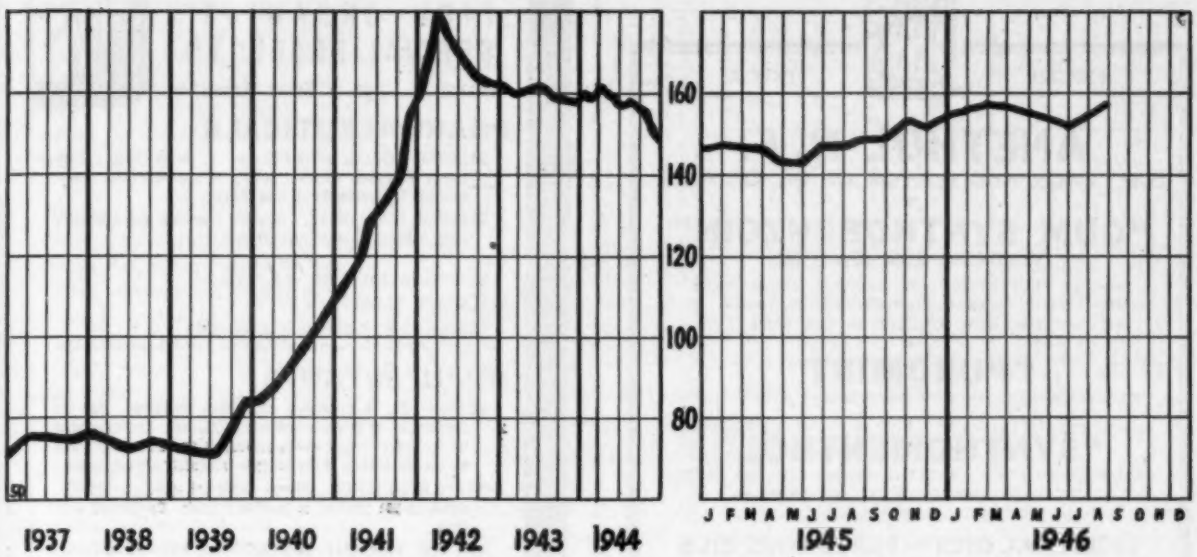
EMPIRE STATE BLDG., NEW YORK 1, N. Y.

50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for August advanced from 155.7 to 159.2.

Botanical Drug Shortages Persist. Imports Improve But Domestic Collections Still Lag Behind Needs

Prices in the market for crude drugs during the period under review were sensitive to supply shortages as well as high costs. To date, returns of 1946 domestic collections do not presage substantial improvement over the 1945 supplies. Though arrivals of foreign botanical drugs are more favorable, current detentions at the ports of entry slow up the transfer of needed materials into consumption channels. A number of items continued in short supply. The January-April total of crude drug imports rose 73 per cent over last year's comparable record.

Psyllium Scarce

The market is bare of blond psyllium seed, a large item in the trade. Users will have to swing to French seed at 65c a pound.

The acreage under psyllium in India tended to fall off during the war, although there was no decrease in demand. The 1946 crop is reported by certain trade sources at about 50,000 bags of 168 pounds each, a large output compared with recent years. The general decline in the trend of production is attributed to expansion in cultivation of other crops, such as fennel and cummin.

The chief consumer of India's psyllium seed is the United States, to which country between 60 and 75 per cent of the crop is exported annually. Exports to the United States of psyllium seeds and husks (separate statistics are not available) in 1945 were recorded at 1,331,671 pounds, compared with 1,345,723 pounds in the preceding year.

The carry-over of the 1945 crop of psyllium seed in producing centers is estimated at 20,000 bags. Stocks of husks in the interior are believed to be small, while almost no stocks of either seed or husks are available in Bombay.

The price of the unhusked seed, per pound, cost and freight, New York, was quoted at 4c in 1939, climbing to between 13c and 16c early in 1946.

Current demand from the United States for psyllium seed and husks is considered sufficient to keep India's trade in a favorable position.

Vanilla Firm

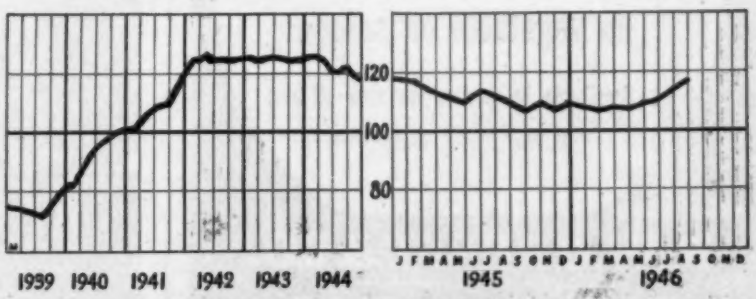
A sizable quantity of vanilla beans arrived here from Madagascar. It is estimated that the arrival totaled between 150 and 200 tons which represents the bulk of the export quota for the United States covering the final half of the year. The tonnage has an estimated value of about $2,500,000.

Reports from Mexico continue favorable, but beans from the coming crop will not be available in this market until March/April.

Carnauba Wax Shipments From Brazil Declined

In 1945 Brazil exported 9,432 metric tons of carnauba wax, valued at $13,521,850, according to the Servico de Estatistica of the Ministry of Finance. Exports in 1944 amounted to 11,130 tons, worth $14,911,100. The peak war-

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index was up from 136.8 to 139.5. Citric acid and cod liver oil were higher.

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time tonnage to the United States was shipped in 1941; exports in 1945, amounting to 7,622 tons, worth $9,257,404 were only 75 per cent of the volume in 1941. In January, 1946, exports of carnauba wax to the United States amounted to 150 tons, according to unofficial figures.

Papain Up

A brisk demand for Papain is accompanied by an upward trend in prices with latest offerings of powdered material being quoted at from $5.25 to $5.50 per pound. The consumption of this item is reported to be rapidly increasing. The bakery trade is using the article, and it is understood that it is being used in the distillation of alcohol from products other than grain such as potatoes.

The new outlets, it is said, have resulted in attempts to purchase the entire production for the next three years. Prices at the primary center have advanced 50c a pound within the past two weeks.

The article has long been used in medicine and pharmacy as a digestant and in recent years it has been found especially suitable as a meat tenderizer.

Ceylon is the principal supplier of papain, but prior to the war imports were received from Great Britain with smaller shipments originating in Nicaragua, New Zealand and Siam.

Kenya's Pyrethrum Crop

Kenya's pyrethrum crop reached a high in 1945 of 7,409 long tons (2,240 pounds), according to the Pyrethrum Board of Kenya. Production was 13 per cent greater than the previous high of 6,547 tons in 1944.

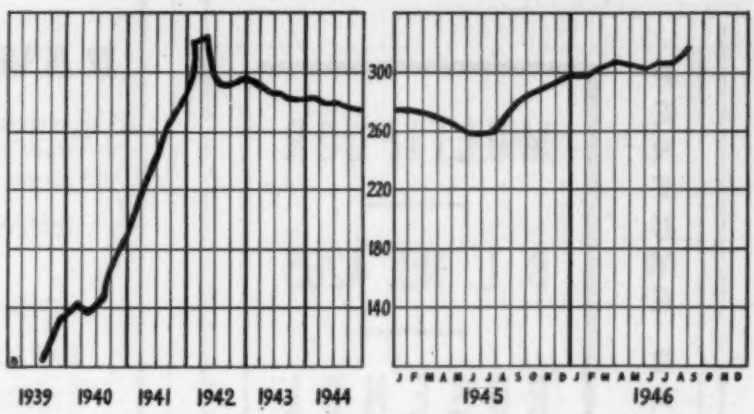
The British Ministry of Supply will purchase the 1946 crop at the same prices as in 1945, or at approximately 30 cents per pound for top grade.

ESSENTIAL OILS

Demand for essential oils expanded during the period under review. Domestic production was hampered by difficulties in obtaining raw materials, inability to obtain needed new equipment, and labor-management difficulties.

Foreign oil receipts from prewar sources have not come up to expectations. Some improvement has been indicated in European oils but the much needed supplies from the Netherlands Indies in general remain "futures." Only irregular and small quantity lots have entered.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced from 299.9 to 331.1. Ergot, rhubarb, senna, gentian were higher. Aloes and cascara were down.

Total essential oil imports during April were 36 per cent below the March volume; however, the latter was the highest monthly record since that of June 1945. Bois de rose, eucalyptus, rose, juniper, and rosemary were important among the gain items. Bergamot receipts were the first recorded this year, and sandalwood and origanum entered after no receipts for one and two months, respectively.

Trade reports indicated that June imports included a quantity of Italian oils, lemon, bergamot, mandarin, and orange. Reaching our ports also were the Russian oils, coriander, rose, and pine needle. Small quantities of palmarosa, patchouli, vetivert, jasmin, and neroli arrived to better the existing narrow supply margins, making possible offerings of small lots. The receipts of petitgrain, bois de rose, lemongrass, sandalwood, and eucalyptus were significant because of the tight supply position; however, spot reserves failed to benefit because of the heavy demand.

Grass Oil From Guatemala

The production of volatile oils from highly scented grasses has in recent years become a part of Guatemala's agricultural economy, says a recent study by Graham S. Quate, Agricultural Attache at Guatemala City. Each year a third of a million pounds of this valuable product are exported from the country.

This agricultural industry, relatively new to the Americas, has been one answer to the local farmer's need for an original cash crop in addition to coffee, which is the main source of income for Guatemala. In the Republic of Guatemala the sale of essential oil from citronella and lemongrass has provided means for the reclaiming of a number of insolvent or abandoned plantations. It has given employment to hundreds of farm families at better-than-average wages, and it has become a new source of foreign exchange, Recent wartime profits have been high.

Now the enterprising group who established the industry at considerable risk are reinvesting their earnings, plowing this new cash back into the land in an effort to improve production methods and reduce costs to a point where they may successfully compete with the Far-Eastern producers who previously had exclusive control of this interesting agricultural pursuit.

Exports From Madagascar

Madagascar's exports of most essential oils were larger in 1945 than in 1939. Of the aggregate 1945 volume, shipments to France accounted for 59 per cent, shipments to the United States for 27 per cent, and the remaining 14 per cent was shipped to other countries.

Rosewood Oil Firm

Brazilian rosewood oil is very firm and, if anything, seems to be on the way up, but it is said that supplies of wood in Brazil are very scarce. It is today being offered at a price only a shade below $6 a pound, and while this is not the highest point it has ever reached in the past several years, it is not far from it.

Lemongrass Up

Likewise on the upward movement is oil of lemongrass, starting material for the manufacture of the ionones. Very little is being offered, and it is said that

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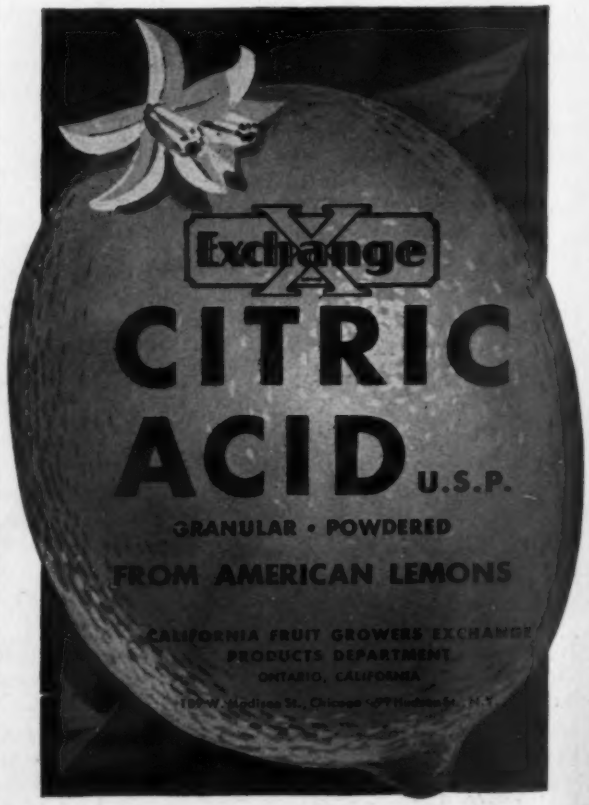


representatives of several European countries are buying considerable quantities in India. The price in the American market is almost $4 a pound, which is near the highest point it has ever reached. When it is recalled that this oil was selling for from 50c to 60c a pound in pre-war times, it can easily be seen how the new price severely affects the production and sale of derivatives.

Miscellaneous

Peppermint oil is firmer in the country. Orange oil is scarce with some brands unobtainable at present. Apricot kernel oil and peach kernel oil have been withdrawn from suppliers' lists. Prices for patchouli are firm due to limited supplies although some material is reported on the way here. Spot stocks of bergamot are ample and prices favorable to consumers. Country holders of spearmint are asking $6 and upward.

PENICILLIN

(*Continued from page 407*)

medicines from the United States in an average month of 1938, OIT said.

The Civilian Production Administration allocated 1,350,000,000 units of injectible penicillin for export. This is equivalent to 13,350,000 vials of 100,000 units each, 4,500,000 of which were sent to liberated areas. Before approving the large July export allocation, the CPA made certain that stocks set aside for domestic markets were adequate.

Streptomycin Quotas

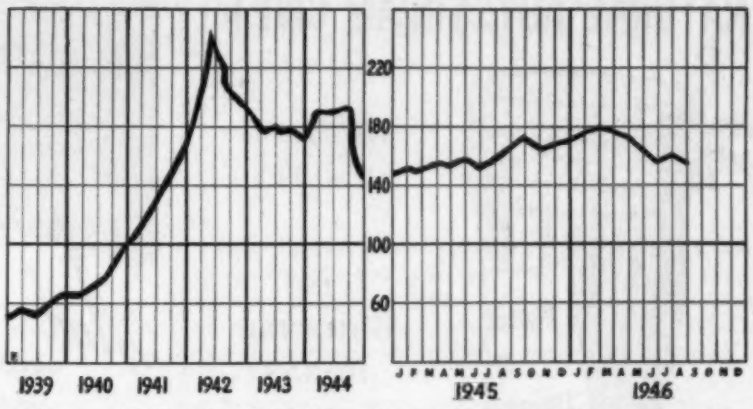
Large-scale production of streptomycin has started at Elkton, Va., and Rahway, N. J., and a greatly increased supply of the drug will be available for allocated distribution during September.

The CPA announced that limited commercial distribution of the drug through designated hospitals for treatment of civilian patients will begin September 1. The plan, which is similar to that used initially for penicillin distribution, was authorized by amending Schedule 119 to Order M-300.

Cod Liver Oil Up

Spot prices on medicinal cod liver oil are higher with the more popular brands being quoted at $2.55 per gallon in 30 gallon drums. Higher potency oils have also been advanced in price to $3.40 and $3.50 a gallon. Exporters in Norway are refusing to accept orders and because of difficulty in obtaining containers there is some uncertainty regarding future shipments of oil against outstanding orders.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index declined from 147.5 to 145.1 Anise, bergamot, cassia and eucalyptus were down. Bois de Rose advanced from $5.00 to $5.15.

Only limited amounts of oil are offered from Iceland. A few orders that are being accepted are being taken at the market price at time of shipment. The general world shortage of fats and oils is undoubtedly having a marked affect upon the cod liver oil situation since substantial amounts of oil are finding their way into European countries for food and industrial uses.

Castor Oil Tight

The castor oil supply situation remains uneased from past weeks. Plant strikes have not been settled and this writing and production is virtually at a standstill. Producers have applied for a higher ceiling and are still seeking clarification of the new Price Control Act as to how it affects pricing of their products. Sellers remain virtually withdrawn from the market.

Silver Salts Tight

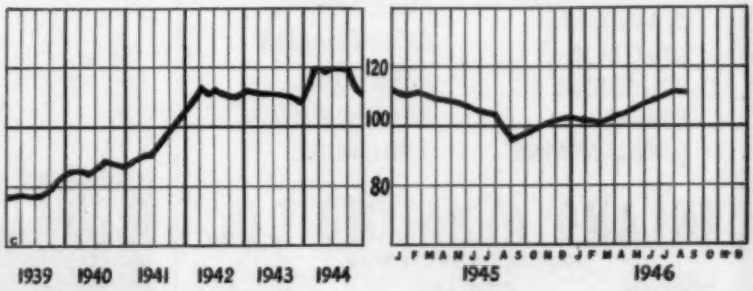
Although OPA has permitted an increase in ceilings on silver salts by Amendment 2 to RMPR 198 to free producers from a tight price squeeze that followed an advance in silver bullion prices, some manufacturers of salts have little or no silver. It is believed the supply situation will ease by late September. Meanwhile, some suppliers have withdrawn prices on silver salts. However, the new pricing formula permits, for example, an increase of from 47¾c an ounce to 60¾c an ounce for silver nitrate in 250 ounce bottles.

Mercury Arrives

While an unsettled tone continues to prevail in mercury it is not likely this market will be materially affected by the arrival of approximately 8,196 flasks with a value of about $560,000. It is the largest single lot of foreign metal to arrive in the United States since the war. The metal is of both Italian and Spanish origin and is said to be goods that were seized during the war. The metal, it was said, will immediately start moving into the export market.

Locally, sellers continue to quote $98 to $101 per flask for spot metal but it is believed the inside figure might possibly be shaded on a firm order.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index declined fractionally from 112.7 to 112.1. There were changes in the price of glycerin and spermaceti.

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READERS' QUESTIONS

BENZYL BENZOATE LOTIONS: Will you be kind enough to send me several formulas for benzyl benzoate emu'sions or suspensions, with little or no alcohol, for treating scabies? Your favor will be appreciated. Long Island City.

Here are several alcohol-free benzyl benzoate preparations for treating scabies:

I

Benzyl benzoate	25.0
Triethanolamine	2.0
Stearic acid	7.0
Distilled water, to make	100.0

Add the stearic acid to the benzyl benzoate and dissolve with gentle heat. Add the triethanolamine to the water and bring to the same temperature. Mix the two solutions and shake gently.

II

Benzyl benzoate	25.0
Sodium lauryl sulfate	2.0
Magma bentonite, N. F.	50.0
Distilled water, to make	100.0

Mix the benzyl benzoate and the bentonite magma in a bottle by agitation. Dissolve the sodium lauryl sulfate in the water, then add to the first mixture with gentle agitation.

A concentrated preparation can be made as follows:

Triethanolamine	2.0 Gm.
Oleic acid	8.0 Gm.
Benzyl benzoate, to make	100.0 cc.

Warm the first two ingredients on a water bath, then add the benzyl benzoate, with stirring. Prior to use, 25 cc. of the above is added to 75 cc. of water.

ANTIPERSPIRANT: Do you have a good antiperspirant cream formula, if so, please oblige. Maplewood.

Products of this type have been described in our publication quite frequently. From an article published in our June, 1944 issue, I take the following formula of the vanishing cream type:

Acid-stable glyceryl monostearate	170
Spermaceti	90
Glycerine	39
Distilled water	380
Preservative	1
Aluminum sulfate	150
Distilled water	150
Titanium dioxide	20

Dissolve the aluminum sulfate in 150 parts of distilled water, then stir the titanium dioxide into the solution. Heat the glycerin, the other portion of distilled water and preservative in the mixing kettle to 90°C. Heat the monostearate and the spermaceti also to 90°C., and introduce into the water phase with fairly vigorous agitation. Stir until the emulsion is well formed and almost cool, and then gradually add the mixture of aluminum sulfate, distilled water, and titanium dioxide.

PERFUMERY DEFINITIONS: Having been a subscriber to your magazine for quite some time, I wonder if you could give me some information regarding a question which was asked of me by one of my customers. The question is "What is the difference between an essence, a perfume and an extract." New York City.

An essence is a strong alcohol solution of an essential oil.

An extract is a perfume raw material obtained by various processes of extraction such as enfleurage (for flower petals), masceration, use of volatile solvents or distillation

A perfume is the product obtained by the careful and skilled blending of odorous raw materials, odor modifiers and fixatives in a suitable vehicle, which is usually a special grade of alcohol.

SKIN SOFTENER: Please send me a formula for a skin softener for dry skin. Los Angeles.

Your request for a skin softener for dry skins can be answered with a typical formula for a lubricating cream such as the following:

Cocoa butter, odorless	7.0
Beeswax, white	20.0
Cetyl alcohol	2.0
Mineral oil, white	45.3
Cholesterin (pure)	2.5
Borax	1.0
Water	21.0
Methyl parahydroxybenzoate	0.2
Perfume	1.0

Weigh off and put the fats and waxes into a melting tank, turn on the steam and allow them to melt; when melted, add the cholesterin and stir with a wooden paddle until dissolved. In another kettle put the water and add the borax and preservative and heat until solution has taken place. Then run the melted fats into a mixing kettle, start the agitator and allow the water and borax solution to run in. Be sure that cholesterin has been thoroughly dissolved before adding the alkali solution. Continue mixing until the temperature drops to about 110°F. and then add perfume oil. Mix thoroughly until the cream drops to pouring temperature.

INCORPORATING MENTHOL: I have had difficulty in incorporating menthol in a cream base. The menthol seems to mix with the other ingredients, but on cooling the cream is grainy. How can I overcome this difficulty? Brooklyn.

An old pharmaceutical trick will probably solve your problem. Dissolve the required amount of menthol in a small quantity of alcohol and, on a slab with a spatula, thoroughly mix it with a small portion of your cream. The menthol will be evenly distributed in the mixture and the alcohol will evaporate off. Incorporate this portion with the rest of the cream; mixing well.

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Men and Dollars

(*Continued from page 339*)

plied by a carefully chosen credit organization can be a most helpful tool in passing judgment on whether a man meets a particular organization's standards.

It is just as important to train new men carefully as it is to select them. Putting a man on his own without proper training is expensive folly. A well planned program to teach new representatives the art of thinking, planning, speaking is of first importance. Today, with most pharmaceutical companies increasing their sales staffs from 50 to 100 per cent, it is essential that the men be well trained. It will soon be obvious that the houses having the best informed representatives, and products exhibiting the latest advances in therapy, will get physician acceptance, followed by dollar sales.

Training of Representatives

It is not enough to expose new pharmaceutical representatives to technical information without telling them how to apply it. Those who have seen large numbers of medical representatives in action have been impressed with the high percentage who do not know how to think and plan. The men who have learned the art of selling and service put these two fundamentals into everyday practice.

In a talk before the Sales Executives Club of New York, able sales consultant, Burton Bigelow, said, "Here is a secret of sales training I give you freely. If you want to make sales training interesting, remembrable, effective and pleasing to the group, couch your training not in terms of teacher to student but in terms of real sales situations with real people saying realistic words and salesmen giving realistic answers to realistic objections, and making realistic approaches under realistic conditions. You can give the sales class one dose of that medicine right after another and they'll never tire of it . . .

"Sales training is not a single dose remedy. It properly consists of a never-ending diet of 'nutritive infusions,' ringing in the basic problems and principles in new applications, new situations."

Speech Training—One company in the pharmaceutical industry has been using speech fundamentals as part of their training course. In the introduction to their speech manual, this company says, "Speech is the means by which you make or fail to make sales. That is why good speech is money in your pocket. When you make persuasive use of your voice, articulation and pronunciation in phrasing your sales presentation, you are on the highway to success. For you may have the best product or service in the world to sell, and there may be urgent need of it, but until you convince the buyer that this is so, you have missed the boat."

The teaching of speech fundamentals is certainly worthy of careful consideration for inclusion in any sales training program. The medical representative may be called upon to talk before hospital and drug gatherings, but even if he is not his day to day voice

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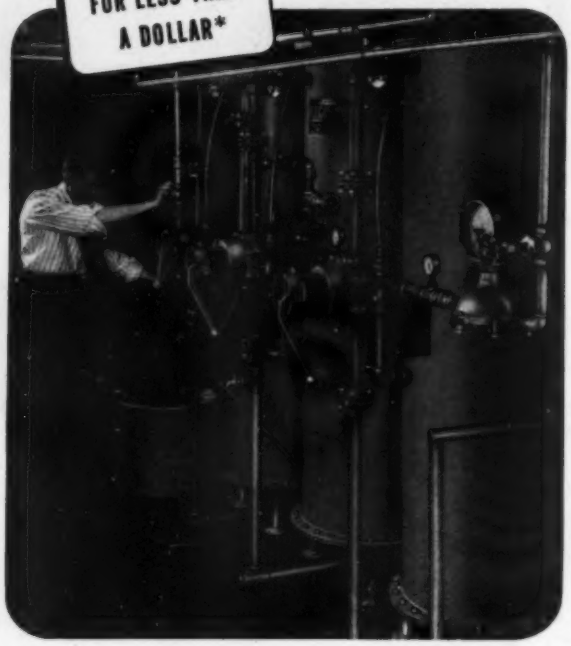

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contacts with the medical and drug professions necessitate a pleasing voice approach. Speech fundamentals would seem to be a logical part of any pharmaceutical sales training program.

The Road Ahead

Thomas Nelson stated the post-war sales picture well in a paper presented to the members of the American Pharmaceutical Manufacturers' Association. Said he, "The post-war salesman will be trained in the techniques of thinking peculiar to his job—not just in the information he needs in his "sales kit."

"He will have guidance in building and maintaining the attitudes and points of view that characterize a self starting, self managing business man engaged in selling.

"He will be assisted in eliminating personality mannerisms that hinder and handicap and he will be aided in developing those mannerisms that make acceptable and influential personalities.

"Training in basic thinking habits, in constructive attitudes and in personality characteristics is fundamental and sound sales education; anything less is superficial. Too often it has been the superficial which has been emphasized while the more sound and basic programs have been neglected.

"The post-war period demands better programs; it demands programs in areas previously neglected. Fortunately the basic principles and methods for such programs are available."

The sales manager interested in getting more men and dollars will need to give increasing attention to improving sales techniques. A man who has a staff well trained in sales fundamentals will not need to be concerned about the future. The big three formula for successful post-war selling is the art of thinking, planning and speaking.

Emulsion Technology

(*Continued from page 341*)

and aluminum and magnesium soaps for the former. In the writer's opinion, the oriented wedge theory, while being far from universally accepted, and considered by some contemporary writers as outmoded, serves as a sound theoretical basis for obtaining good practical results. Briefly, it may be set forth as follows:

Using soap as an example, we have a molecule consisting of a polar group at one end and an organic radical at the other. The polar group lies in the aqueous phase while the organic group lies in the oil phase. In Figure 1, the organic segment is wider than the polar group, causing the surface of the water to assume a convex form, and producing a water-in-oil emulsion. The opposite effect is achieved in Figure 2, where the polar group is wider than the organic radical and the water surface assumes a concave form in order to accommodate the wider polar group and so forms an oil-in-water emulsion. For the purposes of illustration, the size of the soap film in relation to that of the oil or water globule has been greatly exaggerated. The diameter of

a dispersed globule would average 2μ while the entire area of a single sodium oleate molecule for example has been shown to be on the order of 30 sq. Å[12]. In the case of soap, we have a molecule which consists of a hydrocarbon group at one end and a carboxyl group with the hydrogen atom replaced by a metallic ion at the opposite end. This theory was disputed by Wellman[21]; but, on the whole, it has been sustained by the great majority of workers. Many modifications, amplifications, and variations have been set forth by others. However, all agree that the properties and characteristics of the emulsifying film are instrumental in affecting the nature and stability of the emulsion. The study of soap films has been greatly facilitated by the more modern laboratory techniques, such as the use of X-ray diffraction photographs[12] and the knowledge of their structure and characteristics has grown considerably.

Other Emulsion Theories

Holmes, basing his conclusions on the emulsifying action of cellulose nitrate[13], stated that the ideal emulsion film must be one that forms readily and comes to an equilibrium between the peptizing action of one phase and the precipitating action of the other[14]. Briggs[5] arrived at a similar conclusion, stating that the efficiency of an emulsifier was due to its ability to form a tough, elastic film at the oil-water interface. He showed that sodium oleate forms oil-in-water emulsions and calcium oleate produces water-in-oil emulsions; and that the presence of both soaps in the same emulsion is detrimental to its stability, as one tends to nullify the emulsifying properties of the other. Fischer[10] also found that the alkaline soaps were good emulsifiers; but he based their action solely upon the fact that they were solvated colloids and, as such, tended to hold or "bind" the water. Clowes[7] working with sodium hydroxide, calcium chloride, sodium oleate, and calcium oleate, studied the influence of the ionizing effect of electrolytes upon the stability of soap films. He noted the phase inversions that resulted from the types and concentrations of electrolytes employed. Bhatnagar[3] in his film studies emphasized the importance of the wetting-out of the adsorbed film and dealt with other emulsifiers than soap. He also studied the phenomena of phase inversion by varying the relative volume of the two phases in the presence of barium and aluminum salts[4]. Lange's[15] concept of an ideal emulsifier was one that contained in its molecule salt-forming groups which favored its solubility. He also distinguished between an emulsifier and an emulsion stabilizer. There are many other factors which involve emulsion stability. Clayton[9] mentions time, temperature, Ph, and incorporation of air. Verwey[20] summarizes the work done in studying the electrophoretic forces present in emulsions and reviews some of the theories regarding the Brownian Movement, Potential and The Helmholtz Double Layer. Discussion of these phenomena however, is beyond the scope of this treatment.

Another very important factor is the viscosity of the external phase, since its proper control can greatly in-

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•

"A" has represented hotstuff since Nathaniel Hawthorne wrote "The Scarlet Letter."

•

Surprising that the professional paragraphers neglected to describe "Operations Crossroads" as Blandy's Fission Mission. (A fission, as everybody knows, is polite for nuclear hernia).

•

All told, it seems to us Bikini is showing less damage than the United Nations sessions. Splitting atoms, in other words, is less dangerous than splitting hairs.

•

All of which, for no good reason, reminds us of OPA's resurrection. Seems like only yesterday when OPA was being blamed for the Black Market. That's like blaming the increased divorce rate on marriage.

•

Wonder if Sigmund Romberg had the Mead Inquiry in mind when he wrote "Very Warm for May."

•

Which speculation, naturally, leads to the observation that next winter's Havana tourists will go to see such wonders as Morro Castle, the Bacardi plant, Casino Naccionale, Murray Garrson. What a parlay!

•

Politics never seemed so interesting. The war, to hear the Senate tell it, was fought between the Military's brass and the contractors' crust.

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fluence the stability of many types of emulsions. This will be covered in a forthcoming article in this series dealing with the more practical aspects of emulsion formulation.

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Package Inserts

(*Continued from page 333*)

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For those who have not used package enclosures it might be well worthwhile to study their possible application.

New Drugs for Allergy

(*Continued from page 336*)

rence of undesired side reactions. In some cases these reactions have been so severe as to warrant discontinuing the drug; the symptoms disappearing on cessation of medication. Drowsiness has been reported in a large number of cases. In some instances, this symptom was so severe that the patients stopped the use of the drug. In others this effect would diminish or gradually disappear even while continuing the drug. Other side effects include dizziness, dry mouth, a feeling of nervousness, urinary frequency, nausea, vomiting, tinnitus and numbness, or tingling in the hands and legs.

Logan[33] has noted that there seems to be individual variation in the dose necessary to produce a favorable effect. In view of the unpleasant side effects, Brown[35] feels that it is advisable to restrict the dose of Benadryl to the minimum effective dose.

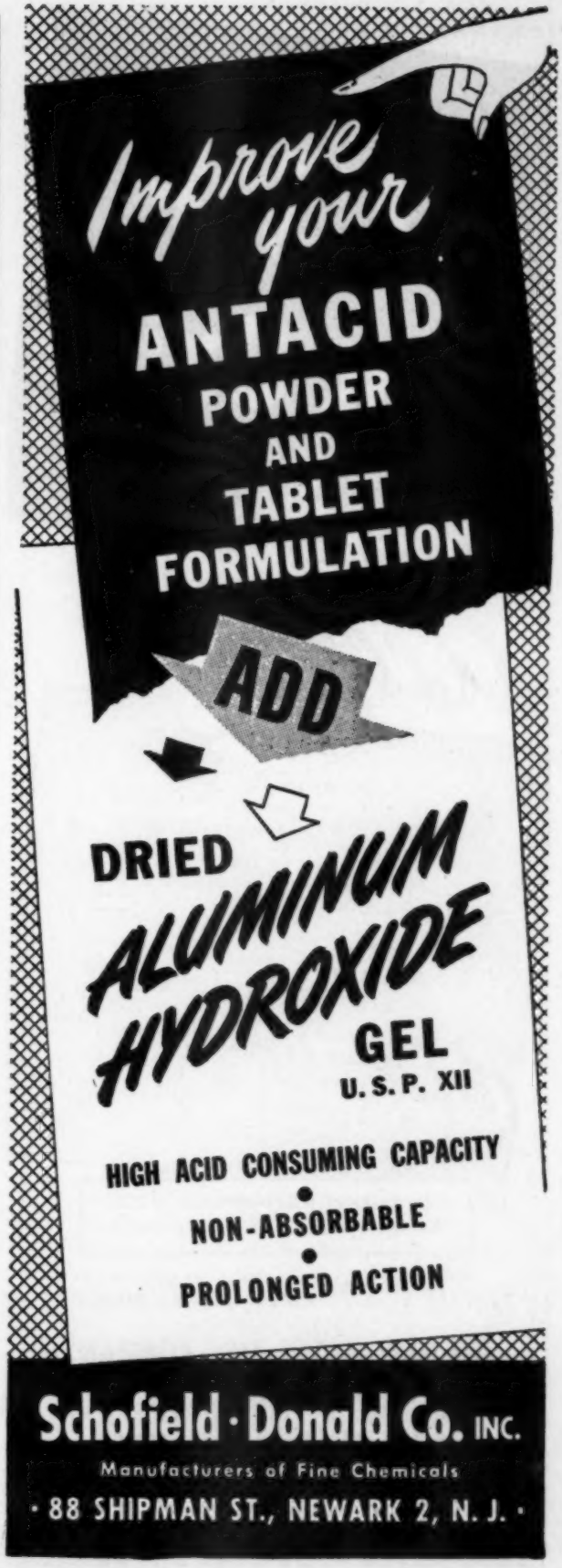
Although there are not so many published reports on Pyribenzamine, the accumulated laboratory and clinical data reveals this drug as another potent weapon against allergy. Chemically speaking, it is N′-pyridyl-N′-benzyl-N-dimethyl-ethylenediamine monohydrochloride. Experimental studies[36] have shown it to possess the very desirable properties of high antihistaminic activity combined with a relatively low toxicity. Found to be highly effective orally or parenterally against anaphylactic and histamine shock, it was also observed that the toxic dose of Pyribenzamine is many times the protective dose.[18] Mayer,[37] in a comparison of many of the recently synthesized antihistaminic and antianaphylactic substances, concluded that Pyribenzamine appeared to be the most potent of these drugs.

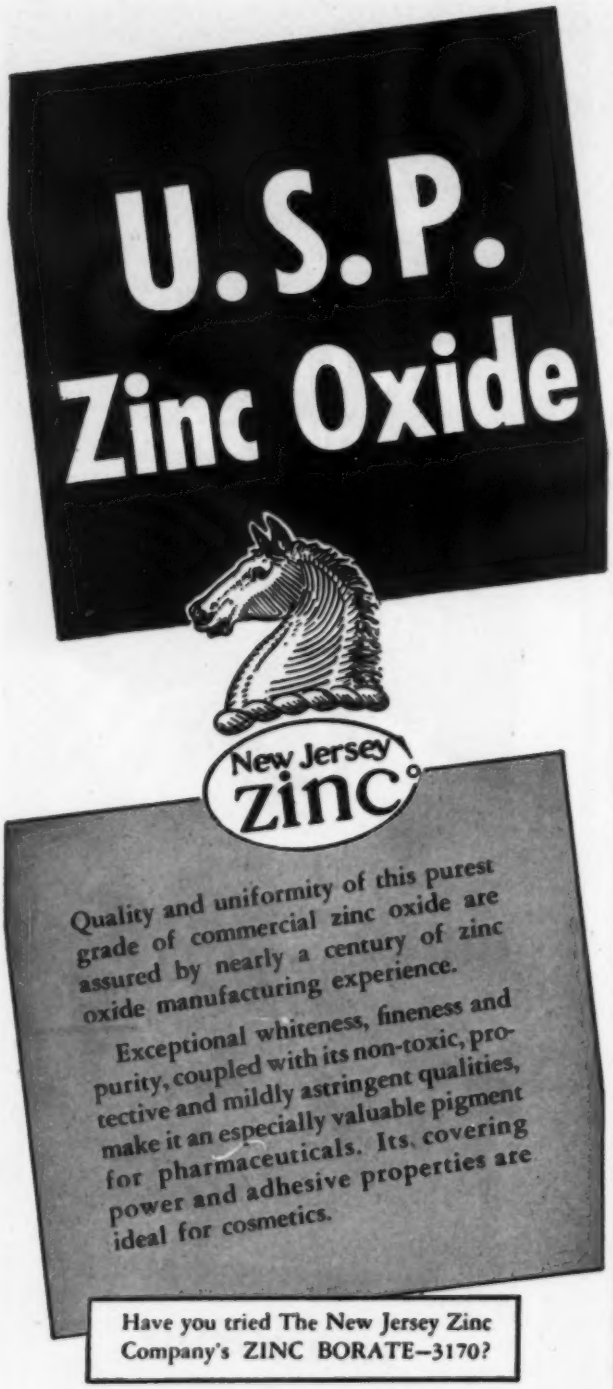
Pyribenzamine may be described as a chemical whose pharmacological action is characterized by its marked capacities to antagonize many pharmacological actions of histamine and prevent or alleviate anaphylaxis and certain clinical forms of allergy. Perhaps the strongest indication which supports the idea that Pyribenzamine is specifically antihistaminic, according to Mayer,[37] is the fact that "it counteracts histamine in the same order of magnitude as histamine acts itself."

Clinical studies, especially those done by Arbesman and his associates,[38] have provided a good basis to judge the therapeutic efficacy of Pyribenzamine. For example in a series of 200 cases of hay fever and allergic rhinitis, 152 or 76 per cent were improved by treatment with Pyribenzamine. The results indicate that pollen-sensitive cases are benefited the most. Not so high a proportion of benefit is obtained in patients with asthma. Thus, of 54 patients with this condition, only 42 per cent were improved by administering the drug.

Acute urticaria and urticarial drug eruptions respond to Pyribenzamine better than any other allergic condition.[4] Arbesman and his coworkers reported that 14 or 93 per cent of 15 patients with acute urticaria were improved by the drug. Of Epstein's[4] 8 cases, all were benefited. Good results were obtained in cases of chronic urticaria: 33 out of 44 (75 per cent) in one series,[38] and 5 out of 6 cases in another.[4] In the series of 15 cases of urticaria evaluated by Baer and Sulzberger,[39] 7 obtained good to excellent relief from Pyribenzamine alone, 2 obtained fair relief and 3 obtained no relief. Fair to excellent relief resulted in 3 cases from Pyribenzamine combined with other therapy.

Although the evaluation of antihistaminic drugs in atopic dermatitis (allergic eczema) is very difficult, Epstein has been especially impressed with the relief of pruritus obtained with these agents. In his experience, Pyribenzamine seemed more effective than Benadryl. but the number of cases treated did not permit any definite conclusions. The itching of all 7 cases treated with Pyribenzamine was relieved. However, such high

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results were not obtained by Baer and Sulzberger who classed "relief" in atopic dermatitis as "significant improvement of eruption and lessening of itching." Five of their 11 cases experienced no relief from the drug.

While possessing a wide margin of safety, Pyribenzamine is capable of causing undesired side reactions. Gastrointestinal complaints, like nausea and occasionally vomiting, are the most common side effects.[17] Drowsiness is also noted in a number of cases and associated with this reaction in some cases were such symptoms as dizziness, faintness and headache. Other symptoms were noted on occasion, but in many instances these various untoward reactions could be circumvented by reducing the dose.

Of course, comparisons have been made between Benadryl and Pyribenzamine. In one such study, Friedlander and his associates[40] reported that although both drugs were of approximately the same value in preventing anaphylactic shock in guinea pigs, Pyribenazmine was considerably more active than Benadryl in preventing fatal histamine shock in the animals.

However, Epstein[4] has noted that, even though they are different chemically, these two drugs have a remarkable similarity in regard to their physiologic and antiallergic action so that one may discuss them together. Both drugs afford about the same percentage of relief in various allergic conditions. Both are of low toxicity when given orally, and are well tolerated, and the undesired side effects, such as sleepiness and dizziness, are usually mild with normal doses. However, his own series of cases, indicates that these side effects were less frequent with Pyribenzamine. Feinberg[17] has also remarked on the therapeutic similarity between the two drugs, and mentions that Pyribenzamine does not produce the drowsiness often associated with Benadryl, although other side effects may be present.

While Benadryl and Pyribenzamine are both highly specific against histamine, it must be noted that these drugs are also mildly effective against acetylcholine and probably possess additional pharmacologic qualities as indicated by their sedative effect. Therefore, the fact that an allergic condition is relieved by these drugs is not absolute proof that the condition was caused by the release of histamine,[4] more must be learned concerning the action of these drugs.

Considerable interest has been aroused by the comparative newcomer, Anthallan. As a chemical substance, it is described as: 3′ di (*n.* butyl) aminomethyl-1, 4, 5, 6-trihydroxy-benzo (1, 2,-C) furan-1′ (3′)-one. So far, experimental work has failed to show the mechanism of the drug's action. Though it seems to possess weak antihistaminic action, it has yet to be determined whether the therapeutic effect of Anthallan can be explained on this basis.

To date, two indicative reports have appeared describing the therapeutic efficacy of this drug. In the first of these, Ghiselin[3] devotes himself to a consideration of the effects of Anthallan in the several conditions which he classes under the term, "hyperesthetic rhini-

tis," (e. g. hay fever, allergic rhinitis, etc.). Despite his explanation, Ghiselin has been criticized[41] for introducing a new expression into an already confused terminology.

In this series of cases, all patients had suffered from their condition for varying periods of time and had obtained only temporary relief from customary methods of treatment. Given Anthallan, beneficial effects were noted in 90 per cent or 40 out of 44 courses of treatment. Objective and subjective improvement varied between 25 and 100 per cent, and the persistance of improvement on completion of Anthallan therapy ranged from 7 to 248 days, with an average of 50 days.

The second report, prepared by Schwarzschild,[42] presented an evaluation of the therapeutic usefulness of Anthallan in a series of 84 cases including 35 cases of neurodermatitis diseminata, 41 cases of urticaria, and 8 cases of papular urticaria. A significant beneficial influence from the drug was observed in about 80 per cent of the cases; this improvement varying between 50 and 100 per cent. Thirty-one of the neurodermatitis cases, 36 of the chronic urticaria patients and all of those with papular urticaria obtained benefit from Anthallan such as had not been provided by any previous treatment. In a large majority of the patients, the beneficial effects of Anthallan therapy persisted.

From these two published reports it appears that the incidence of undesired side effects from Anthallan is quite low. In Ghiselin's series only two patients reported side effects; one a temporary rash, and the other a diarrhea which disappeared on a lower Anthallan dosage. In Schwarzchild's series, there was only one case of transient diarrhea. In both series of cases, clinical examinations and laboratory studies were made to determine the toxicity of the drug. No indications of toxicity were reported from Anthallan.

Despite the therapeutic usefulness and safety indicated in these two reports, work is going forward to more fully evaluate this drug and to determine its broader scope of application, its therapeutic safety and its mode of action.

Now that the way has been opened and the road indicated, newer and better antiallergic drugs are being sought. In France, a newer product called "Neoantergan," superior to Antergan is being tested clinically, and other antihistamine compounds are being studied in the laboratories.[43] Similar studies on antihistaminic agents are being reported from American research centers.[44] All of these new drugs will require careful checking before they can find extensive use. With all this work going on, and with quite effective drugs already available, the allergy victim may look forward to a much more pleasant life, freer of sneezes, sniffles, wheezing and itching.

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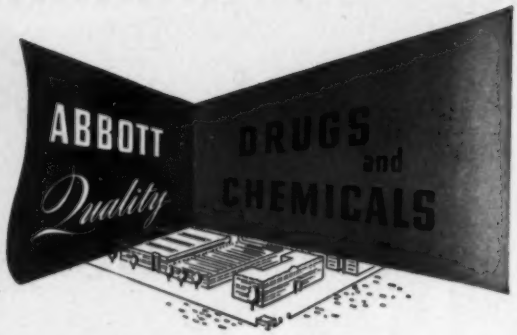

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Charles Revson

(*Continued from page 337*)

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Trends in Modern Medicinals

(*Continued from page 345*)

Chloroquine is superior to atabrine for the following reasons: (1) It causes an abrupt termination of the clinical attack of vivax malaria (non-fatal, up to twenty relapses in three years) and will cure falciparum malaria (often fatal, but not relapsing) when administered for only one to two days as compared with four to six days for atabrine. (2) It is an effective suppressive (keeps disease mild or dormant) when administered no more frequently than once weekly in a well-tolerated dose. The once-a-week dosage is less than one-half the total amount of atabrine that must be consumed in a week. (3) It does not discolor the skin as does atabrine. (4) It does not produce the disagreeable gastrointestinal symptoms which are sometimes

encountered with atabrine. (5) The cost of production is the same as for atabrine. Chloroquine or SN7618 has been successfully used in 5000 human cases of malaria including more than 1000 in the Armed Forces. The dosage of this drug as would be used in the suppression of malaria is 0.3 Gm. given weekly and on the same day each week. For treatment of a case of malaria the initial dose is 0.6 Gm. followed by 0.3 Gm. six to eight hours later and 0.3 Gm. on each of two consecutive days. A dosage of 1.2 Gm. in divided doses may be administered for twenty-four hours. In a comparative study with quinine and atabrine relapses were found to occur in 40 per cent of the cases treated with quinine; in 26 per cent with those treated with atabrine; and in 21 per cent with those treated with chloroquine. Chloroquine is available as Aralen from the Winthrop Chemical Company.

British workers recently announced a new and more effective synthetic chemical substance for malaria known as paludrine. Chemically this drug is known as N_1-p-chlorophenyl-N_5-isopropylbiguanide. This drug appears to have advantages over both quinine and quinacrine (atabrine). It is less toxic than either, which means it can safely be administered over a long period without risk of untoward reactions or after-effects. It appears to be effective in preventing relapses of benign tertian malaria; one of the commonest forms of malaria, for which other drugs are almost useless in cases of relapse. It is more powerful and the equivalent dose is found to be one part of paludrine equal to three of quinacrine (atabrine) or to ten of quinine. Quinine and quinacrine have shown themselves most effective in controlling the worst symptoms of malaria, but all the parasites are not destroyed. Later when the sufferer ceases to take the drug, he frequently falls again with an attack.

Another advantage that paludrine possesses over quinacrine is that it does not produce the yellowing of the skin characteristic of the person who has been taking the latter. Its prophylactic action is also greater. Although more prolonged trials are required, the new drug may afford almost 100 per cent protection if taken in the correct doses.

The most recent antimalarial to be announced is SN13,276. This drug possesses possibilities of curing vivax or relapsing malaria. However, the clinical trials are as yet too incomplete to say definitely.

Rh Factor

The existence of different blood types has been known for many years. One classification used today is as follows:

Type		*Per Cent of Population*
O	No agglutinogens in cells A and B agglutinins in serum (universal donor)	45 per cent
A	A agglutinogens in cells B agglutinins in serum	41 per cent

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Unfortunately, this classification does not take into consideration another agglutinogen which is present in 85 per cent of humans (white). In 1940 Landsteiner and Wiener injected the blood of rhesus monkeys into rabbits thus developing agglutinins in the rabbit serum that would clump monkey cells. This same rabbit serum clumped the cells of 85 per cent of humans regardless of the blood group shown above.

The agglutinogen responsible for this clumping has been called the Rh factor taken from the word rhesus. As stated previously it is present in 85 per cent of humans. In other words 85 per cent are Rh+ and 15 per cent are Rh—. It is a dominant hereditary trait and can cause a great deal of trouble in transfusions. The transfusion of Rh+ blood into an Rh— individual results in iso-immunization so that antibodies (agglutinins) form which will clump any successive transfusion of Rh+ blood.

If a woman who is Rh— married a man who is Rh+ and in due time becomes pregnant the foetus will be Rh+. If there is some damage to the membrane between the foetus and the mother, some of the foetal blood will seep into the mother forming agglutinins which in turn pass back into the foetus and clump the cells causing the conditions known as *erythroblastosis fetalis*. This is most likely to occur in successive pregnancies. If the baby survives it is possible to overcome the condition with a transfusion of Rh— blood. The mother's blood must not be used even though it is Rh— since it possesses the agglutinins. The father's cannot be used because it possesses the Rh agglutinogens.

In emergency transfusions when there is not time for blood typing, the O type or universal donor blood which is in addition Rh— should be used. Lederle Laboratories have recently made available an anti-Rh serum which is used for Rh typing. The serum causes Rh+ blood to clump. This can be examined microscopically and there are very few cases of Rh+ blood which will not clump with this serum.

Motion Sickness

One of the most common conditions from which human beings suffer is known as motion sickness due to train, airplane or boat travel. In the past the barbiturates have been used but have not proven very effective. A new product known as Vasano and marketed by Schering which contains 0.4 mgm. of hyoscyamine camphorate and 0.1 mgm. of scopolamine (hyoscine) camphorate in tablet form has been found successful. However, with all these remedies there is one disadvantage in that they produce drowsiness. This is of no significance in regards to passengers but it is quite significant if taken by pilots.

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Promin

Leprosy has been a long-treated disease and one for which very little effective therapy has been developed. A new drug, promin, recently placed on the market and known chemically as sodium p,p′—diamino—diphenyl —sulfone—N,N′—di—(dextrose sodium sulfonate) has proven of some value in leprosy. It is intravenously administered in doses of 2 to 5 Gm. (5-12.5 cc.) daily for six consecutive days and omitted on the seventh day. At the conclusion of each four months of treatment it should be interrupted for a period of one or two weeks. Serious toxic reactions from this drug are rare although a slow destruction of red cells has been observed. The patient should be kept under constant observation and complete blood counts done every two weeks. This chemical is not a specific but it does have a slow definite action.

Experiments were carried out at the Carville leprosarium which showed that any drug expected to be bactericidal against *M. leprae* will be slow, as the disease attacks the skin and the peripheral nervous system, which are difficult of access by blood. *M. leprae* is a wax-encapsulated, resistant organism, and found more abundantly in lesions than is customary of other infections. Incubation periods for leprosy are long, requiring years for development. Most of the experiment's subjects had suffered from the disease for a number of years. Despite all of these deterrents to chemotherapeutic action, promin showed noteworthy value against leprosy. Promin ampuls containing 2 Gm. of the substance are available from Parke, Davis. Promin jelly is used topically in tuberculous lesions.

Furacin

There has been developed recently a synthetic compound chemically known as 5—nitro—2—furaldehyde semicarbazone. This compound occurs in the form of bright yellow crystals and is soluble in various solvents as follows: water, 1:4200 Gm./cc.; alcohol (95%), 1:590 Gm./cc.; acetone, 1:415 Gm./cc.; ether, 1:12,500 Gm./cc.; benzene, 1:43,500 Gm./cc.; chloroform, 1:27,000 Gm./cc.; propylene glycol, 1:300 Gm./cc.; carbowax 1500, 1:100 Gm./cc. It is a non-toxic and nonirritating compound with a low index of sensitization. It has been made available as Furacin Soluble Dressing by Eaton Laboratories. The base of this soluble dressing is water washable and water miscible and can be removed from wounds with warm or cold water or physiological saline solution. The base mixes with body fluids readily releasing the furacin. It does not retard tissue repair. It is composed of carbowax 1500, 55 per cent; carbowax 4000, 20 per cent and propylene glycol, 25 per cent. Furacin soluble dressing is used as a local application to kill bacteria without too much injury to human tissues. It is effective in old wounds and in the presence of blood, pus, serum, serous exudates and bacterial debris. It is employed in the following special conditions: surgery—infected surface wounds; severely infected burned areas—third and

fourth degree burns; varicose ulcers; carbuncles and furuncles, after surgical intervention; superficial ulcers of diabetics; and areas being prepared for skin grafting. Pediatrics—impetigo and infants and children; secondarily-infected eczema. Dermatology—impetigo of adults and children; secondary infection of toes and feet superimposed on a fungus infection. Secondarily-infected eczema—orthopedic surgery; areas being prepared for skin grafting; osteomyelitis associated with compound fracture. Routine dressing for non-infected wounds—minor lacerations; abrasions; avulsed wounds.

The dressing may be placed directly on the wound, with or without covering with a dry dressing. Limited quantities may be melted and poured into the wound or it may be placed on gauze, which is then applied and covered with a bandage. The dressing may be changed one to three times every twenty-four hours. There may be a slight liquefaction on the surface of this dressing in hot weather. For this reason it should be stored in a cool place.

Fertility

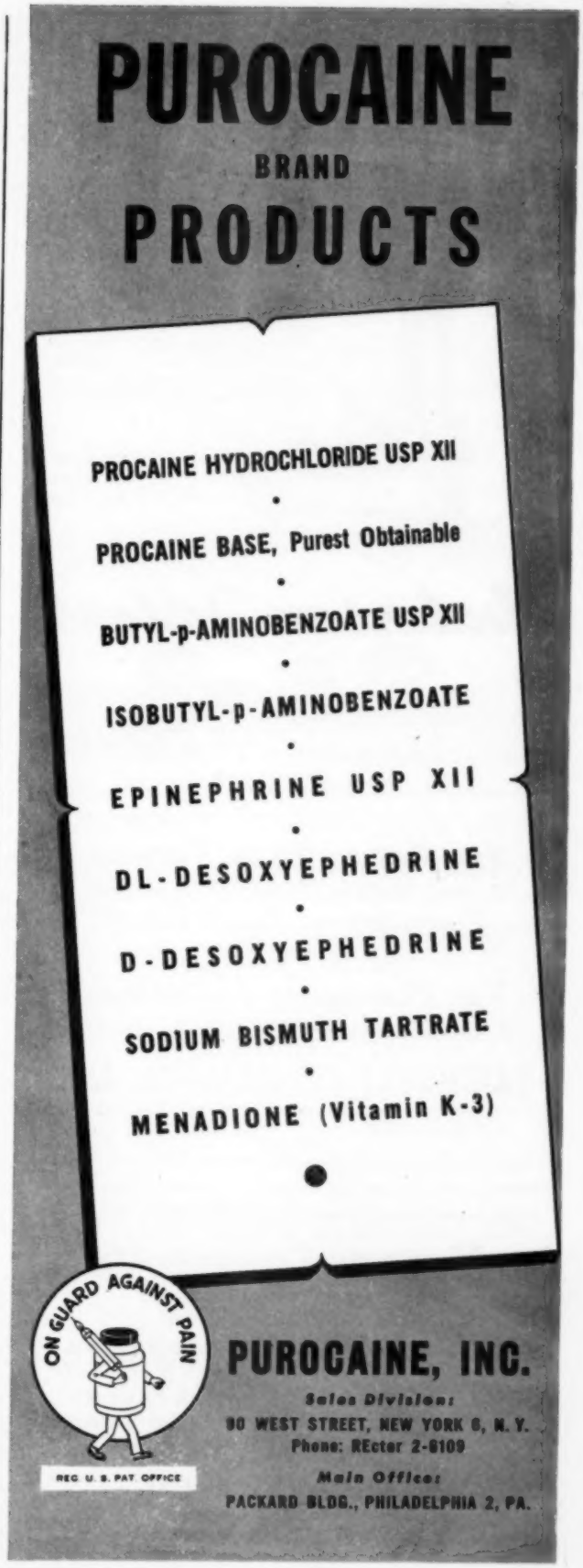
A recently developed product for the promotion of fertility has been made available by Ortho Pharmaceutical Company. This product known as Nutrisal contains potassium chloride, sodium chloride, calcium gluconate and glucose. It provides glucose in modified Ringer's solution. As a vaginal douche when dissolved in water, it aids in the survival and migration of sperm thus promoting the likelihood of fertilization where no serious condition causing infertility exists.

Migraine

Migraine has been a subject of discussion for many, many years. Included in this syndrome are periodic headaches, nausea and vomiting. Ergotamine tartrate has been used in the treatment of migraine. A new drug recently made available by Sandoz Pharmaceutical Company and known as dihydroergotamine has been found just as effective as the former. It causes paralysis of the sympathetic nervous system similar to that caused by ergotamine tartrate but it is eight to ten times less toxic. It differs from ergotamine tartrate in that it possesses no uterine effect even in large doses and possesses a less powerful vasoconstrictor action. It is a safe drug in avoiding acute attacks of headache but unfortunately it does not prevent recurrences.

Antispasmodic

A new antispasmodic for the urinary tract chemically known as 3-(beta-diethylaminoethyl) 3-phenyl-2-benzofuranone hydrochloride has been recently developed. This drug acts as an antispasmodic on smooth muscle especially the kidney, ureter and bladder. It is employed to relieve spasm and pain caused by urinary tract calculi, catheterization injection of urinary contrast media and indwelling catheters or packs. It possesses marked local anesthetic properties particularly in the cornea on which it acts within thirty to eighty minutes



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but it produces considerable irritation. The side effects of this drug are less than with atropine. In urinary calculi, catheterization and similar cases the dosage is 100 mgm. intramuscularly. In bladder spasm the dosage is 50 to 100 mgm. orally. There may be some reactions following administration but a small quantity of barbiturate lessens them. It should never be administered intravenously since this brings the entire dose into the circulation at one time. This synthetic drug is available under the name of Amethone and is supplied in capsules and solution by Abbott Laboratories.

Two new antispasmodics have been developed which are not yet available for use. The two compounds being investigated by Frederick Stearns and Company are known as "Stearns 600" and "Stearns 606," or chemically as beta-diethylaminoethyl phenyl-alpha-thienyl-glycolate hydrochloride and beta-diethylaminoethyl phenyl-alpha-thienylacelate hydrochloride respectively. Both 600 and 606 are effective in reducing uterine irritability and the pain of dysmenorrhea. The former acts as a stimulant to the central nervous system whereas the latter does not. Thus it is probable that the latter is preferable since it relieves spasms and pain without excess nervous stimulation.

Rutin

A drug with medical values undetected for more than a century, is ready for full scale production for the first time and enough to meet present medical needs in treating fragile and weakened capillaries will be available this year.

Commercial manufacture of rutin, a bright yellow non-toxic powder, has been made possible by the discovery by the Bureau of Agricultural and Industrial Chemistry that the green buckwheat plant is an economical source.

According to clinical observations at the Medical School of the University of Pennsylvania, rutin is effective in the treatment of conditions arising from high blood pressure associated with increased capillary fragility. Bursting of weakened blood vessels causes small hemorrhages which may result, when the rupture occurs in the eye or brain, in blindness or apoplexy.

Research indicates also that rutin, a glucoside, may have equally unsuspected nutritional values. Further investigation of the nutritional uses is expected, but the studies point to the opinion that rutin could serve the circulatory system in a manner resembling the action of vitamin C in the growth and hardness of teeth and bones.

Adrenochrome

An oxidation product of adrenalin known as adrenochrome has been found in Germany and brought to the United States. Adrenochrome is an important tool in testing certain modern theories of the causation and possible therapy of hypertension. It has been tested only on laboratory animals. It is thought that adrenochrome itself has little future as a therapeutic agent,

but that good results may be obtained with some of its derivatives.

Carbon 13

A great deal has been heard about atomic fission. The Sun Oil Company and the Houdry Process Corp. with the aid of certain distinguished scientists, some of whom worked on the atomic bomb, have developed a new isotope known as Carbon 13.

This substance will probably rank in importance with X-ray as a tool of medical science. It makes it possible for the chemist to see and follow chemical reactions in the body. Carbon 13 is used as a tracer in probing the secrets of the fundamental processes that occur in all living things, as well as metabolic disease processes, of which cancer, diabetes, hardening of the arteries and so-called heart trouble are examples.

Indistinguishable chemically from ordinary carbon, Carbon 13 is absorbed in living tissues and undergoes the same metabolic process as does ordinary carbon. But where ordinary carbon cannot be traced as it passes through these intricate chemical reactions, which are the processes of life itself, Carbon 13 can be detected by the aid of an electrical instrument called the mass-spectrometer, and identified with specific bodily functions.

Dermatophytosis

Dermatophytosis, or dermatomycosis, is defined as any disease caused by a parasitic plant growth. Although this condition was receiving increasing attention in medicine prior to the War, fresh significance accrued when the United States was drawn into the conflict. War, marching soldiers, and their feet are inseparable problems. A survey revealed that no less than 8 per cent (one in every twelve) of all hospital admissions in the Armed Forces were for cutaneous disease. Dermatophytosis ranked second on the list.

The American Medical Association has established certain maxims for prophylaxis and treatment of dermatophytosis (athlete's foot) which everyone would do well to follow and pharmacists would do well to publicize to their patrons. Several new products have recently been developed and marketed which have been of value in the treatment of dermatophytosis. Sopronol is marketed by Wyeth, Inc. This product contains sodium proprionate and is available in the form of an ointment, a powder and a liquid. Propionic acid and the propionates have been found of greater value in the treatment of dermatophytosis, not only of the feet but also of the groin and other portions of the body. Sodium propionate is available under the name of Mycoban from E. I. duPont de Nemours and Co., Wilmington, Delaware.

Desenex, as marketed by Wallace and Tiernan Products, Inc., contains undecylenic acid and zinc undecylenate in ointment and powder form. These products, too, have been found of value in the treatment of dermatophytoses.

(To be continued)

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